DOCUMENT RESUME

ED 174 771 CE 022 040

AUTHOR	Eggland, Steven A.
TITLE	The Development and Evaluation of a Directed Occupational Experience Program. Final Report.
INSTITUTION	Nebraska Univ., Lincoln. Teachers Coll.
SPONS AGENCY	Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.
BUREAU NO	498AH70174
PUB DATE	Dec 78
GRANT	G007701955
NOTE	360p.; Some pages in this document will not reproduce well due to broken type
EDRS PRICE	MF01/PC15 Plus Postage.
DESCRIPTORS	Curriculum Development; Higher Education; *Learning Modules; Performance Based Teacher Education; *Preservice Education; Program Development; Program Effectiveness; *Program Evaluation; *Teaching Skills; *Vocational Education Teachers; Work Experience; *Work Experience Programs

ABSTRACT

A study was conducted to develop and examine an alternative to the traditional occupational experience method of the development of professional vocational teacher education competencies. A professional competence examination was developed to measure effectiveness of varying types and amounts of occupational experiences in developing vocational teacher competencies. A modular curriculum was written and implemented along with an occupational experience at four university sites. Pre- and posttests were administered to a laboratory group consisting of preservice business and distributive education teachers. Two reference groups, which had occupational experience without the modules, were also examined to provide a control. Results indicated that professional vocational education competence can be engendered through a directed occupational experience program strategy. (The professional Competencies Battery with scoring instructions, and copies of the twenty directed occupational experience modules are appended. The modules focus on the areas of program planning, instruction, cooperative education, community relationships, technical development, laboratory plan, guidance, advisory committee, and program evaluation.) (JH)

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ED174771

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OCT 2 1979

Final Report

Project No. 498AH70174
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Steven A. Eggland
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Teachers College
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THE DEVELOPMENT AND EVALUATION OF A DIRECTED OCCUPATIONAL EXPERIENCE PROGRAM

December, 1978

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

Bureau of Occupational and Adult Education

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Author's Abstract

The Development and Evaluation of a Directed Occupational Experience Program

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This study was intended to develop and examine an alternative to the traditional occupational experience method of the development of certain professional vocational teacher education competencies. A modular curriculum was written and implemented along with an occupational experience in four university sites. Pre and post measures were administered to a laboratory group consisting of preservice vocational education teachers. A reference group also was examined to provide a control. Results indicate that professional vocational education competence can be engendered through a directed occupational experience program strategy.

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The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view of opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

Bureau of Occupational and Adult Education

PREFACE

The completion of a research and development project of this scope required the cooperative efforts of several committed professionals. Their efforts should be recognized and enthusiastically applauded.

--Jim Burrow wrote the successful competitive proposal that attracted support to this project.

--Roger Bruning helped to conceptualize the project management model and provided invaluable and supportive consultation assistance in his role as co-director.

--Dale Kennedy was a simultaneously creative and pragmatic measurement and research consultant throughout the life of the project.

--Garnie McCormick did a technically superb job of managing the project's human and fiscal resources as well as constructed a highly relevant literature review.

--Barbara Ludwig developed a curriculum that elicited strong positive reviews from its consumers and earned credibility through the research design.

--The site coordinators (Tom Smith, Barry Reece, Jack Reed and Verna Kruse) provided the very important environment for an experimental examination of the curriculum.

There were countless others in the form of secretaries, curriculum reviewers, reactor panel members and so on who performed various indispensible roles contributing to the completion of this project. Thank you every one.

Steven A. Eggland
December, 1978

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Chapter I

INTRODUCTION

One component of certification requirements for vocational teachers in most states is occupational experience. This occupational experience usually must be in the general area the teacher is preparing to teach and most often occurs in a business, industry or institution and, presumably, it should add to the prospective vocational teacher's professional competence. That is, it should contribute to the effectiveness and credibility of vocational instruction.

The occupational experience requirement is most frequently stated in terms of years or total hours of work experience that must be completed by the prospective teacher before certification to teach will be granted. That amount of years or hours varies from state to state as does the method of assessing the preservice vocational teacher's occupational experience. In many instances that assessment is subjective at best. Often documentation evidence that either substantiates the value of occupational experience or major efforts to identify a more objective base for the professional development of vocational teachers, the contributions of occupational experiences to that development have largely been ignored.

Within the literature opinion seems to be the prevalent form of justifying the occupational experience requirements for vocational teacher certification. That opinion generally favors such a requirement, but there is a diversity of thought on the length and nature of occupational experiences as well as their value to the vocational educator and how effectiveness of the experiences can be documented.

There are other concerns surrounding occupational experience requirements. Meyer has summarized several of them through a series of questions in a report on a project designed to provide occupational experiences for distributive education teachers.

> First, why do state plans for vocational education invariably include occupational experience among certification requirements of various vocational education personnel?
>
> Second, assuming the validity of the trade experience criterion, exactly how does experience in the occupation contribute to equality of vocational instruction?
>
> Third, what are the criteria for evaluating the occupational experiences of candidates for teacher certification?
>
> Fourth, is the value of occupational experience of equal importance to instruction in all of the recognized vocational education fields?
>
> Fifth, does the occupational experience requirement that is superimposed on other certification requirements, such as content, and general and special professional education courses, restrict the number of persons preparing to be vocational teachers?
>
> Finally, assuming the need for experience in the occupational field taught, what types of activities should be included in planning a student's program, both on the job and in school? (26:177-178)

There is now a growing literature indicating the probable importance of occupational experience as an element in vocational teacher preparation. However, the amount of occupational experience required by many states may hinder the entry of potential vocational teachers into the profession. And as consideration is given to the movement of teachers from areas of surplus to occupational areas where shortages exist, any unrealistic barriers caused by occupational experience requirements need to be removed.

An alternative to developing and measuring occupational experience and competence by clock hours is beginning to gain wide acceptance. This alternative is the creation of directed occupational experience courses within vocational teacher preparation programs. These courses are designed to include two complementary components: actual occupational experience concurrent with a seminar designed to supplement that experience. The seminar serves to develop and reinforce professional competence required of vocational education teachers. An added effect of directed occupational experience is the opportunity for preservice teachers to integrate theory and practice causing changes in behavior and attitude toward work and education.

With this in mind, Burrow and Groneman (4:--) assembled national panels of vocational education teacher educators and state supervisors. They used the Delphi procedure with those panels to develop purposes of occupational experience as well as generate thirty competencies that could be developed through occupational experiences. Based on the findings of their study, it was clear that a need existed within vocational education to measure specific effects of occupational experiences on the development of professional competencies needed by vocational teachers. In addition, a need to determine if directed occupational experiences for preservice vocational education teachers were effective in developing those competencies was shown.

OBJECTIVES OF THE STUDY

The general purpose of this study was to examine the relationship between types of occupational experience and professional competence among vocational teachers. It was conceived to discover if directed occupational experience was an effective alternative strategy for the development of selected professional vocational education competencies generated by Burrow and Groneman. The study also embodied a curriculum development and evaluation activity designed to determine if a packaged learning format was useful in professional competency development in a directed occupational experience seminar.

The first of the specific objectives of the study was to develop and test instruments to measure the extent to which preservice vocational education teachers' occupational experiences contributed to the development of professional vocational education competencies. In accomplishing this objective a professional competence examination was developed and administered that would measure the effectiveness of varying types and amounts of occupational experiences in developing professional competencies of preservice vocational education teachers.

The next objective was to develop and implement a directed occupational experience program for preservice vocational education teachers. In accomplishing this objective a modular or packaged directed occupational experience program was developed that included administrative and instructional materials. Four teacher education institutions were identified and served as testing sites for the directed occupational experience program with a teacher educator at each site trained to direct the program.

The third specific objective was to evaluate the effectiveness of the directed occupational experience program in developing selected professional competencies for preservice vocational education teachers. This was accomplished through the operation of the directed programs at the selected teacher education institutions. Reference groups of preservice vocational teachers were also selected to participate at each site and data were collected through a pre-test admininstered to the laboratory group and a post-test administered to the laboratory group and the reference group after the administration of the directed occupational experience program. Data were analyzed that determined the effectiveness of the directed occupational experience program as a method of competency development for preservice vocational education teachers.

DELIMITATIONS

Although the project staff has some confidence in the generalizable nature of the findings and products growing from this study, several delimitations should be noted:

1. The sample drawn for this study was from among only business and distributive education preservice teachers.
2. The four sites utilized in the evaluation of the directed occupational experience program were not randomly selected.
3. Data were gathered from students working in both quarter and semester scheduling systems.

4. The professional competence batteries were not empirically refined prior to administration.

DEFINITIONS OF TERMS

Certification: An authorization to teach an identified subject or subjects in the public schools which is granted to those persons who have met the requirements of the certifying agency.

Competencies: Individual skills, knowledges, attitudes, and task perfommances which are summative and crucial to the effective practice of a given profession or career.

Occupational Experiences: Those planned or unplanned experiences gained on a part-time or full-time job in business or industry directly related to the subject area that is taught.

Preservice vocational education teacher: Any person participating in an approved vocational teacher education program with the intent of becoming certified to teach a specific subject or subjects.

Professional competencies: Those competencies specifically related to the profession of teaching. Vocational teachers are usually required to have a combination of professional and technical competence.

Directed occupational experience program: An instructional course or program for preservice vocational education teachers consisting of a part- or full-time job related to the student's occupational area under the supervision of a vocational teacher educator. The purpose of the program is to use a work setting to develop competencies needed by the prospective teacher.

Chapter 2

REVIEW OF LITERATURE

Based upon the intent and scope of this project and a review of the literature, Competency Based Teacher Education, Vocational Certification and Learning Activity Packages have been identified as three major components of this research. The following chapter will discuss the opinions of professionals in education and research that has taken place to date. The discussion will first include, Competency Based Teacher Education, next, Vocational Certification and finally, Learning Activity Packages.

Competency Based Teacher Education

The need to determine effectiveness of Competency Based Teacher Education has brought about an urgent cry for research in that area. Potter, in a paper presented at the annual meeting of the American Educational Research Association addressed this concern. His comments were:

> "Competency Based Teacher Education (CBTE) cannot be defended unless a systematic large-scale research effort is directed to discovering the linkage between patterns of teacher behavior and student change." (34:--)

This is not to say that a great amount of material is not available; a multitude of writers have jumped at the opportunity to express their thoughts on the subject.

Schmieder in The Last Relatively Complete Tenative Bibliography on Competency Based, justified the title by stating:

> "It is partly a reaction to the fact that bibliographies have had the same dull titles since the time of clay tablets, but it is mostly a tribute to the very rapid growth of materials now available and soon to be available on the subject." (39:--)

In late 1971, Schmieder's first "complete" bibliography of the subject included 22 items, his present collection included over 800 entries and he anticipated by the time the book was published at least 800 more good pieces on competency based education would have been generated. Krantz's comment about this effort was:

> "Although the volume of publications about competencies is large, there is seldom any evidence of an attempt to derive procedures from or even relate them to any theoretical formulation." (22:28)

Auerbach felt this flurry of activity was creating bandwagon pressure with a juggernaut effect that may be arousing high expectations without any realistic examination. (2:2)

The bandwagon pressure identified by Auerbach was expressed in even greater magnitude with the Davies position that CBTE has graduated to a level which may be considered a "movement". The significance of this is not only in its growth rate, but also for understanding the lack of conceptual clarity. Davies voiced:

> "The competency based idea has become a movement. It has all the standard characteristics -- confusion, proliferation of ideas and activities, differing schools of thought, lots of energy and talent, strong advocates, and outspoken critics." (6:--)

To state that competency based education has grown to be a science would be a fallacy, and it may never be considered a pure science. (22:29)

The issue of CBTE and the cynicism which follows that issue was described by Riechard with the discussion of two points of view (pro and con) to the question of "Must we bother with competency-based teacher education?" Members of a group labeled "Old Ostrich Group", who of course had their heads in the sand, reacted to the issue by stating:

> "No, we must not waste time on CBTE!" (37:418)

Riechard concluded:

> "They rejected the movement unequivocally and defended their position by pointing to the following real or imagined weakness of CBTE: it has a limited research base - - - " (37:418)

Auerbach indicated similiar sentiments with the statement:

> "What is it that we cannot accept in CBTE? First, any claims that it has an adequate research base for identifying the factors which produce effective teaching." (2:3)

Moore specified research was needed in the remark:

> "- - -(Somebody) must collect data to find out if students of competency based intern teachers have different learner outcomes (than students of conventional intern teachers)," (29:16)

Taking a similiar stance as to the complete transition from traditional teacher education to competency-based teacher education Gillie emphasized:

> "Replacement of current in-service and pre-service vocational teacher education with a series of competency-based alternatives should be viewed with caution." (13:31)

An event that continues to exist to reach a stage that is considered to be a movement suggests there must be characteristics within that event which fortify other needs. An observation of this process was made by Hayden and Hofmann. They summarized:

> "Some of the advantages of the CBTE movement are that it specifies student and teacher outcomes, helps individualize instruction, brings obout cooperation between the public schools and the colleges in working out plans for improving education, and focuses attention on some of the major areas in education that need improvement. Some of the problems with CBTE are that there is an inadequate research base for identifying the factors which produce effective teaching and any attempt to relate teacher skills to student achievement does not offer an empirical basis for the prescription of teacher training objectives." (16:2)

Foell condensed several professionals concern about CBTE in the synopsis:

> "In summary, it appeared that CBTE, when implemented by educators of teachers should be studied to determine if it offered a viable means of producing teachers. Furthermore, it whould be evaluated in terms of the competencies produced, and on this basis compared with other teacher education delivery systems." (29:25)

Woditsch, Schiesinger, Giardina and Litwin saw CBTE Research coming to a more theoretical framework. They suggested:

> "The small portion of literature that might be classed as research is almost exclusively descriptive, and reports either analysis or comparisons of "What is being done." (e.g., Sherwin, 1973) A review of Dissertation Abstracts on PBTE (Performance Based Teacher Education) disclosed an added step toward research: studies which take compe-

> tency lists from PBTE programs to practicing teachers for various ranking and corroborations." (45:3)

Finch & Hamilton comparing CBTE and traditional teacher education delivery systems found many shortcomings with "traditional" delivery systems. Those shortcomings included, but were not limited to:

> (1) Teacher education curricula are not built upon the actual work requirements of teachers;
>
> (2) Instruction is not tailored to meet the needs of individuals;
>
> (3) Learning experiences are not provided which relate directly to professional needs; and
>
> (4) The educational product is not systematically evaluated. (10:107)

The nature of vocational teacher performance has come under increasing scrutiny in recent years. Attention is being focused on the need to develop an objective base of performance requirements for vocational teachers. A 1973 report by the National Advisory Council on Education Professions Development called for the identification of techniques for measuring teacher performance. The council conceded, however, that such a task is difficult because of the "lack of agreement on what constitues a good teacher." (30:116)

A theoretical framework for research in the identification of teaching competencies was described by Potter:

> "Performance based teacher education rests upon the assumption that there exists a casual relationship between certain patterns of teacher behavior and specifiable student outcomes. This relationship cannot be examined at all without our first defining and describing in behavioral terms the nature of the teaching performance to be studied, so that we can at least tell when the behavior has occurred -- in other words, we must be able to measure teacher behavior at least at a nominal or categorical level." (35:2)

Rosner, as chairman of the Committee on National Program Priorities in Teacher Education, reported that measures of teacher competence must be designed to insure the validity of teacher-education curricula. An effective measure must show casual relationships between teacher performance and pupil development in terms of the stated outcomes. Rosner predicted that:

> ". . . unless teacher education can determine which teacher competencies are related to which instructional objectives (and under what conditions), investment in teacher training is speculative." (38:8-9)

The advantages of a competency-base for teacher preparation were analyzed by Daniels. Those advantages accrue to the prospective teacher, the teacher educator, and the employer of the teacher who completes the program. Expectations are explicit and available to the learner prior to the experience. The competencies provide a planning base for the teacher-educator in terms of expected outcomes, instructional planning, and evaluation. And the potential employers can have a specific understanding of the competencies the prospective teacher possesses. (5:8-9)

A University of Georgia survey by Flowers and Shearron found significant differences between first year teachers prepared in a CBTE program and others in a non-CBTE program. The research found the CBTE graduates were markedly more satisfied with their ability to work with children, to work with colleagues, to work with members of the community and to maintain a friendly disposition. (11:280)

The literature in this section has identified Competency Based Teacher Education as professionals and researchers view it in its present state. An apparent void that is mentioned through out the reading is an obvious need for more empirical study of the effectiveness of Competency Based Teacher Education. This study is an attempt to partially erase that void.

Vocational Certification and Work Experience

The question of what qualifications are needed by vocational education teachers is basic to the discussion of the structure of vocational teacher education programs and state certification requirements. The differences that can be noted among such programs and requirements demonstrates the lack of agreement on such qualifications.

In a paper presented at the 1968 Upper Midwest Vocational Teacher Education Conference, Allen commented on the number of variations in teacher certification among states, instructional categories, and grade levels. He indicated that certification requirements should encourage rather than discourage the development of teachers for the variety of needs within vocational education. The purpose of such requirements, according to Allen, should be to "provide flexibility and reciprocity within as well as among states to achieve instructional excellence without damaging desirable standards." (1:18)

Gillie in Principles of Postsecondary Vocational Education noted the variations among states in certification requirements in many states as a combination of academic course work and work experience, "probably because of the ease with which they can be identified and catalogued." However, Gillie points out that specific requirements of academics and work experience do not insure the competence of vocational teachers. (14:183)

In a report on a project to develop competency examinations for use in certification procedures, Kazanes and Keift criticized the certification requirements of many states:

> "The present certification procedures and requirements of most states can be considered unrealistic. Most states require that the prospective vocational teachers have a Baccalaureate degree plus at least three years of job experience for vocational teaching. This tends to discourage many young and ambitious people from entering the profession." (20:5)

At the 1967 National Vocational Teacher Education Seminar, Tonne discussed the nature of teacher certification requirements:

> "We can become so specific in our requirements that we make it impossible to secure teachers. The attitude, personality, and even the basic education of the teacher may be more important factors than highly specialized job experience in a world in which jobs are changing with dramatic frequency." (42:--)

While there is great variation in vocational teacher certification requirements, some amount of occupational experience is a common element of vocational teacher qualification standards among many states.

A study by Thorson in 1972 analyzed the occupational experience requirements for business and office education teachers. The study revealed that 83 percent of the states required teachers to accumulate some amount of occupational experience. (40:--)

Jones conducted a similiar analysis and found that 39 out of a population of 54 states and territories required some amount of work experience for teacher certification. (19:30)

Hammond discussed the historical nature of the occupational experience requirement in Vocational Education: Social and Behavioral Perspectives:

> "At one time collegiate preparation of teachers of vocational education was considered inappropriate, if not inconsistent. The greatest emphasis was laid upon the trade, occupational, or industrial experience. Certain proficiency in the requirements of the occupational field ranked high on the list of essential competencies. Invariably such competencies have been obtained through work experience." (15:202)

While little research is in evidence regarding the nature, purpose, or value of occupational experience to the vocational teacher, opinion abounds within the literature to support the need to occupational experience as a pre-teaching requirement.

Meyer, Crawford and Klaurens described the value of experiences within an occupation to a vocational education teacher:

> "A teacher-coordinator must have sufficient competency in the occupation(s) in which he teaches to command the respect of practitioners in the field. In order to keep up-to-date on the

> technology of his occupational field and to maintain his occupational status, he should participate in selected professional activities of that field. One's professional behavior in his occupational field(s) usually sets an example for his students. It also enables his to become aware of the need for curriculum adjustments and helps him improve his competence in vocational guidance." (26:54)

Beasley and Smiley stated:

> "Through successful work related experience, a person becomes familiar with the skills, technical knowledge and more of the occupation he will be teaching." (3:2)

Wiggins and Carmichael suggested that work experience develops interest in and attitudes toward work which are important for the future vocational teacher. While work experience is not the primary way of developing skills in the "teaching-learning process," it might very well be the best method of personal development and broad-knowledge development available to the vocational teacher.

Work experiences cannot be viewed in isolation, according to Wiggins and Carmichael. It is just one part of the preparation program for teachers. The concern should be for the contribution of work experience to program outcomes rather than viewing it as "a static input to a preparation program." They concluded:

> "Ideally, the subject matter necessary for the person to qualify as a vocational teacher should be a combination of formal class room instruction and work experience. The extent to which the teacher needs work experience is directly related to the level of instruction in which he will be engaged. . ." (44:27-32)

A comparison of training which takes place in the industrial setting was made in the Freeman Statement:

> "If the training the teacher received is analogous to apprenticeship training . . . . it would seem that some or all conventionally required courses other than on-the-job training be held not sufficiently related to the job of teaching." (12:--)

Tonne emphasized problems associated with work experience requirements:

> "There has developed a respect for business experience, as such, which transcends its value. Some experience in business may be

> poor, untypical, or even false, and may do more harm than good as a background. It is true that usually a little experience is better than none. In some cases, however, teachers will assume that their limited experience is typical of all office or store practice and consequently misinform their students." (41:485)

Lessinberry, in a study completed by Olsen, identified topics of concern and needed research relating to occupational experiences for business teachers. They included:

a. What amount of experience is needed;
b. What kinds of experiences should be required; and
c. When the experiences should be scheduled. (31:90)

Hosler, in the same study, described an additional problem inherent in the concept of work experience requirements.

> "The greatest problem with occupational experience is how to evaluate it . . . It varies tremendously and just putting a person out in an office doesn't necessarily mean that it is profitable to any great degree . . . Occupational experience is fine, but sometimes we put too many 'eggs in that basket'." (31:89)

The lack of research on the effects of various lengths of work experience or teaching effectiveness appears to be the concern of many vocational educators. Weber and Everett indicated that there is a need for research into the value of work experience:

> "We have no evidence that any prescribed amount of work experience is a neccessity for vocational personnel competency. It is conceivable that a perceptive teacher without work experience may have 'caught' more of the essence of current business from daily contact and professional reading than some plodder with 10 or even 15 years experience." (43:2)

The preceding literature has been discussing two major concerns of vocational teacher education, the certification of vocational teachers and the work experience requirements that generally accompany the certification. Two rooted issues were what effect, if any, does work experience have on the learning of certain compentencies by a pre-service vocational teacher and what type of work experience can those compentencies be developed. This project has been designed to gather data on the cognitive results of pre-service vocational teachers in a supervised work experience training program.

Learning Activity Packages

One result of the many changes in the way subject matter is delivered in education today has been the learning activity package surfacing to become a popular and promising mode of instruction. This teaching method has also become the topic of discussion by many educators and researchers. The following are some of those comments.

Hofmeisen & Reavis found the definition of a learning package to be:

> "A systemized way of delivery content and process to learners. The term "package" implies a self-contained and portable system." (17:55)

This "package" today exists in numerous forms and is used in a variety of ways. But a majority of them do have a common core of characteristics. Duke in Learning Activity Packages: Construction and Implementation noted:

> "The Learning Activity Package, or LAP, one of the more popular package formats, originated at NOVA High School in Florida. From there, the LAP format spread to many sections of the country where imitators and off-spring appeared, such as the Teaching/Learning Unit, the Duluth Learning Contract, and Individually Prescribed Instruction. Almost all of these package formats share common elements and differ only in length and scope, not in purpose." (7:313)

The terms packet, package and contract are often used interchangeably, thus causing confusion as to what precisely is being discussed. Iwanick found the distinction to be pertinent information when developing "Learning packages". He noted the difference between a Learning Contract and a Learning packet to be:

> "The degree of independence exercised by a student in pursuing the objectives." (18:41)

In the discussion of individualized learning units Magdison commented:

> "Whether an individualized learning unit (ILU) is called a package, packet, module, or mini-course, it is being used by hundreds of thousands of students from elementary school through college." (24:43)

Duke proposed the move from rote learning and beyond basic knowledge has created different learning needs for the student today. This has prescribed the need for learning resources with characteristics found in learning activity packages. His position was:

> "Today's student has a different set of needs from those of the student twenty years ago. No longer is it sufficienct for the student to operate on the rote level of learning; he must, instead, be able to build and go beyond basic knowledge; the ability to translate knowledge into different forms, some of which never existed twenty years ago, must be fostered. In short, modern education faces the challenge to developing students who are adaptive and who are creative in solving new problems as they arise without being restricted by previous experience." (7:320)

Two Canadian educators offered a second opinion to Duke's position. Kuzsman & MacIsaac in their writings about learning activity packages, suggested:

> "The high cost of public education combined with the curriculm revisions resulting from the knowledge explosion have precipitated a clear demand for such an innovation. (Learning Activity Packages.) (23:--)

Iwanicki sited two common practices that reflect our nations school's growing commitment to the individualized learning concept. Those practices were:

> "At the curriculm level school districts are purchasing commercially developed materials which facilitate the individualization of instruction within the classroom. At the instructional level, school districts are approximating funds for the development of additional individualized learning materials consistent with local classroom needs." (18:42)

Farley and Moore in their discussion of teacher-student implications on learning packages viewed LAP's as being an alternative vehicle of continuous progress education in which the use of media and other learning activities are individually prescribed on the basis of diagnosis of learner objectives. (9:9)

A subsequential benefit of the learning package was expressed by Hofmeiser and Reavis. They observed:

> "One advantage of a learning package is that the reproducible format facilitates evaluation." (17:56)

Potter viewed the learning module as a means to accomplish a much needed activity in Teacher Education Research. He expressed:

> "The relationship between teacher behavior and student outcomes cannot be ultimately be tested without simultaneous development of training modules for each teaching skill to be studied." (34:--)

Parsons and collegues has learning modules as having the potential to become a vital strategy in the educational experiences of learners. (32:31)

The present status of learning activity packages for instructional purposes was felt by Miller and Miller to be of significant importance. They expressed:

> "Use of self-instructional, performance based modules has begun to establish itself as a viable, alternative means of instruction. . ." (28:15)

As a process for instruction, Kussman and MacIsaac saw the LAP to be:

> "The most systematic approach to the individualization of instruction yet developed." (23:--)

Referring to learning activity packages and the vocational disciplines, Radway and Schroeden stated that:

> "The concept of "modular instruction" is gaining more prominence in the teaching of data processing as well as other vocational programs." (36:248)

A study by Eastman on the effects of learning activity packages on teacher trainees found slightly higher performances for the experimental group member than the control group in the three areas of measured knowledge, performance in writing LAP's and in the voluntary implementation of LAP's. (21:--)

Research by Meeks at Iowa State University concluded that the Learning Package method of instruction was superior to the conventional method. (25:--)

Duke found the following concerns which the basic structure of instructional packages should be built around:

1. What are the learner's interests?
2. What is the readiness of the learner?
3. What is the learner's rate of learning?
4. What are the opportunities for the learner's success?
5. How will the learner know he has succeeded? (7:317)

The same author's concept of an appropriate format for the instructional package included:

1. Main Ideal of Concept
2. Purpose or Rational
3. Learning Objectives
4. Pre-Test
5. Learning Activities
6. Self-Evaluation or Assessment
7. Post-Test
8. Quest or Additional Learning Opportunities (7:318)

The criteria for evaluation of Learning Activity Packets according to Magdison should comprise of four major areas. Those areas and subparts consist of:

Basis System

1. Introduction
2. Learning objectives
3. Pre-test (Optional)
4. Learning activities
5. Post-test
6. Unit assessment

Techniques

7. Active learner involvement
8. Feedback & reinforcements
9. Sequencing
10. Language & vocabulary
11. Variety
12. Motivation

Content

13. Accuracy of contents
14. Relevance & appropriateness

Form

15. Physical appearance
16. Accessibility
17. Ease of operation (24:--)

In Robert P. Pearson's publication "A Word of Caution on Individualized Instruction in Teacher Education", the paper expressed fear that competency-based teacher education, with its use of individualized instructional modules may neglect a central skill of teaching -- the communication process. (33:--)

If human interaction and academic needs are kept in mind when designing an induvidualized program, Duane felt:

"The program is almost guaranteed to succeed." (8:32)

This segment of the study has shown that learning activity packages have and should continue to be an important component of education. The professionals warned that the appropriateness of each situation in which the package is to be used must be kept in mind. One other caution that is often stated is the threatened loss of a humanistic approach to education. But, it the human interaction could be combined with the Learning Activity Package - it has the potential to create a very effective learning instrument. The Learning Activity Package developed in this project included the human dynamics ingredient in each module.

Throughout the review of literature one common thread becomes apparent and that is a mandate for more research in the areas of competency based teacher education, work experience and the use of learning activity packages. Many sources felt too many decisions have been made without the documentation to support those decisions. The three areas are still very much in an elementary stage of development and more research is apparently needed in order to determine the credibility of each of the three areas as they relate to learning and teacher education. The purpose of this project was to add to that research effort.

Chapter 3

METHODS AND PROCEDURES

The methods and procedures utilized in the conduct of this study are presented in this chapter. The organization of this chapter is responsive to the listing of the objectives of the research. That is, a discussion of the development of the instruments to measure the contribution of occupational experience to professional competence in vocational education is first presented. Next a description is provided of the development of the directed occupational experience program. Finally, a discussion is provided of the procedures utilized to evaluate the effectiveness of the directed occupational experience program.

In order to provide a baseline for the development of the criterion measures and the directed occupational experience program for the eventual measurement of the effectiveness of the program, a list of competencies was selected. They were 20 competencies chosen from the Burrow-Groneman list and placed by five vocational education teacher-educators in hierarchies. Those choices and hierarchies reflected the competencies amenability to development in an occupational setting. The combined hierarchy is presented in Table 1.

Table 1

HIERARCHY OF COMPETENCIES BASED ON AMENABILITY TO DEVELOPMENT IN AN OCCUPATIONAL SETTING

1. Conduct an occupational analysis
2. Evaluate students on the job
3. Identify and secure training stations
4. Coordinate and supervise on-the-job instruction

5. Develop training agreements and training plans for placing students
6. Provide service to and maintain liaison with members of the community
7. Establish criteria and guidelines for initiating a cooperative vocational education program
8. Assist students in applying for employment or further education
9. Develop the training ability of on-the-job instructors
10. Conduct individual and group field trips
11. Organize or reorganize an occupational advisory committee
12. Develop a plan for school-community relations
13. Maintain an occupational advisory committee
14. Keep up-to-date in your occupational specialty
15. Establish criteria for student performance in a vocational education program
16. Direct student laboratory experiences
17. Organize and maintain the vocational laboratory
18. Write student performance objectives
19. Evaluate your vocational program
20. Develop vocational education program goals and objectives

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In order to provide more direction for both instrument and curriculum development, the project director prepared a "dictionary of competency breakdowns" that more clearly defined each of the twenty competencies. This dictionary (presented in Appendix A) was created to lend more definition to the competencies.

THE INSTRUMENTS

The evaluation of the effectiveness of a directed occupational experience program required that criterion measures be developed. They consisted of two tests composed of six general problems each. The problem areas were synthesized and selected from the Burrow-Groneman list and were based on the dictionary of competency breakdowns (Appendix A). Table 2 lists the problem areas represented on the tests. The tests were designed to measure the ability of business education and distributive education pre-service teachers to respond to a set of problems reflecting professional vocational education competence. These problems were organized at what could be labeled a second-order level. That is, the problems were designed as generally representatives of professional competence in the field as reflected in the 20 competencies.

Test development was done by a measurement specialist who worked independently of the program designers and blind with respect to the instructional modules. This was done to insure against potential biases in the test instruments.

Table 2

PROBLEM AREAS OF TESTS I AND 2

Test I

Problem 1	Occupational Analysis
Problem 2	Performance Objective
Problem 3	Evaluation Design
Problem 4	On-The-Job Instruction
Problem 5	Occupational Knowledge
Problem 6	Training Agreement

Test 2

Problem 1	Data Based Goals and Objectives
Problem 2	Occuaptional Knowledge
Problem 3	Computations
Problem 4	Problem Solving Steps
Problem 5	Solution Evaluation
Problem 6	Skills Analysis Method

Drafts of both tests were reviewed by five vocational teacher educators and the tests were revised in accordance with their suggestions. A scoring instructions and recording booklet was developed for each test. Appendix B contains a concept paper that more thoroughly describes the development of the instruments and the attendant scoring model. The tests and scoring materials are included as Appendixes C and D.

THE DIRECTED OCCUPATIONAL EXPERIENCE PROGRAM

In order to provide a medium for the examination of the relationship between occupational experience and professional competence, a series of 20 instructional modules was developed. They were developed around the 20 competencies (generically grouped in Table 3) chosen from the Burrow-Groneman list. Like the instruments described earlier, the module developer used the dictionary of competency breakdowns as the developmental source document. The modules became the heart of a directed occupational experience program. The program included a study of the modules while simultaneously working in a business or distributive occupation.

Each of the modules (presented in Appendix D) was prepared by a curriculum development specialist in consultation with the project staff. The modules had as their purpose the development of each of the 20 selected competencies. They were developed according to a set of specifications and contained the following components: the general competency statement, an introduction, performance (behavioral) objective(s), specific enabling activities, a resource section, and a checklist for cooperative instructor and student evaluation of the students' response to the module. The modules ranged in length from six to twelve pages and students were expected to complete each of them in approximately four hours. Each module was field tested with four students for several factors including appropriateness difficulty, time, precision and accuracy. The modules were revised based upon response from the field testors.

Table 3

SEQUENCE AND GENERIC GROUPS OF DIRECTED OCCUPATIONAL EXPERIENCE MODULES

Introductory Module	
Program Planning	
Conduct an occupational analysis	A1
Develop vocational education program goals and objectives	A2
Instruction	
Write student performance objectives	B1
Conduct individual and group field trips	B2
Cooperative Education	
Establish criteria and guidelines for initiating a cooperative vocational education program	C1
Identify and secure prospective training stations	C2
Develop the training ability of on-the-job instructors	C3
Develop training agreements and training plans for placing students on the job	C4
Coordinate and supervise on-the-job instruction	C5
Evaluate students on the job	C6
Community Relationships	
Provide service to and maintain liaison with members of the community	D1
Develop a plan for school-community relations	D2
Technical Development	
Keep up-to-date in your occupational specialty	E1
Laboratory Plan	
Organize and maintain the vocational laboratory	F1
Direct student laboratory experiences	F2
Guidance	
Assist students in applying for employment or further education	G1
Advisory Committee	
Organize or reorganize an occupational advisory committee	H1
Maintain an occupational advisory committee	H2
Program Evaluation	
Establish criteria for student performance in a vocational education program	I1
Evaluate your vocational program	I2

THE EVALUATION MODEL

The quasi-experimental design was conceived in order to evaluate the effectiveness of the directed occupational experience program in developing professional competencies for preservice vocational education teachers. The design involved the administration of the 20 instructional modules to four laboratory groups at four teacher education institutions and the collection of data from four reference groups at those same four institutions. The experiment was carried out during the Fall and Spring of the 1977-1978 school year.

The Sites

The four sites selected for the experiment were the University of Nebraska, The University of Northern Iowa, Virginia Polytechnic Institue and State University and the University of Northern Colorado. They were selected for their geographic distribution, their excellent business and distributive education programs with requisite numbers of students and their willingness to offer a directed occupational experience seminar and participate in the experiment.

A site coordinator was identified at each location. This person was in charge of the seminar and was responsible for the administration of the experiment at his/her university.

The Participants

The participants were undergraduate pre-service business or distributive education teachers. They were full-time students at one of the four site-institutions. Subgroups of participants were formed (a) on the basis of their enrollment or non-enrollment in special directed occupational experience courses in which the completion of the 20 project-developed modules was required and (b) on the basis of completion or non-completion of required occupational experience prior to or in conjunction with their undergraduate program in the business or distributive teacher education program.

For purposes of the analysis, the participants were formed into three groups. Individuals in Reference Group A (N = 17) had completed their occupational experience requirement prior to the initiation of their undergraduate programs. These participants were not enrolled in the directed occupational experience program. Reference Group B consisted of 20 persons who were also not enrolled in the special seminar. In contrast to Group A, however, these students had completed the required occupational experience during their undergraudate careers. The Laboratory Group (N = 20) participated in the competency based system of directed occupational experiences at the four sites by enrolling in the special seminar program.

PROCEDURES

The instructional modules and tests were prepared during the Fall of 1977 for use at the four project sites during the Spring semester or quarter of 1978. The four project coordinators were oriented in December 1977 by means of an instructional packet. It contained an overview of the project, sample modules and a schedule of required activities for the site coordinators.

The initial activity for site coordinators was the arrangement for and recruitment of students into the special seminar. At all sites, the seminar was individualized with students working with the modules as the requirement for completion of the seminar course. At each of the sites, the site coordinator met weekly with students as a group to evaluate and discuss progress on the modules. Students at Nebraska and Northern Iowa had fifteen weeks to complete the modules; at Virginia Tech and Northern Colorado the modules were completed in twelve weeks.

All students in the Laboratory Group took a pretest: half of the group received Test I and half Test 2 on a random basis. During the term, site coordinators administered demographic questionnaires to all business and distributive education students at their sites. Reference Group members were then selected from this group on the basis of earlier discussed criteria. All groups took a post test at the end of the term. In the Laboratory Group students took Test I or Test 2, the opposite of the test they took as a pretest. One half of the Reference Group students took Test I, and the other half took Test 2--once again on a random basis. Each set of tests and questionnaires was returned by the site coordinators to the project office immediately following its administration.

Data Analysis

The test scorer worked with data pooled across groups and was blind with respect to the conditions and purposes of the study. Each of the tests administered required students to respond to six generic problems. The tests were scored for a number of variables which formed the raw data from which a number of derived measures were computed. Responses to several of the questions were scored for more than one property. Several of the properties were measurable on more than one task. The first order properties represented two general classes of performance: fluency (F) of the student response (i.e. a measure of quantity or volume)and quality (Q) of the student response (a judgment of the logical aspects of student performance.) General (second order) variables were derived by simple computational functions which involved scoring each first order property on a standard scale and averaging the standard scores contributing to the F or Q variables. The computational functions for these variables differed between Tests I and 2 to the extent that the tests contained different numbers of properties contributing to the F and Q variables.

A third order derived measure, strength consisted of the square root of the product of F and Q. The variable S was developed to discriminate between individuals performing at the same level on either the quantitative or qualitative variables compensating for spurious increases in quantity by being sensitive to possible losses in quality.

Consistency of the tests was determined by multivariate analysis of the vectors comprising F and Q for each test. Vectors derived from Test I and 2 were compared statistically. Nonsignificant differences were taken to indicate second order consistency in measures from the non-parallel forms and as indicating that second order data at this level could be pooled in making between-group comparisons.

Demographic data were subjected to preliminary analysis to test for possible differences across groups on the variables. The major analysis involved a three-group comparison among the laboratory group and the two reference groups. Post test data only were used in this analysis. Differences were tested (by a one way fixed effects analysis of variance repeated across the three variables: F, Q and S) by a multivariate analysis combining the three variables F, Q, and S. Specific instructional effects were tested for the laboratory group by assessing change prior to and subsequent to completion of the modules. Pretest and post test scores were analyzed by means of correlated t-tests for each of the dependent measures. Chapter 4 presents the results of these analyses.

Chapter 4

RESULTS

The results of the examination of the relationship between types of occupations, experience and professional competence among vocational teachers are presented in this chapter. The organization of this chapter also reflects the order in which the project objectives were set out in Chapter 1. They were: (1) to develop and test instruments to measure the extent to which preservice vocational education teachers' occupational experience contributed to the development of professional vocational education competencies, (2) to develop and implement a directed occupational experience program for preservice vocational education teachers, and (3) to evaluate the effectiveness of that directed occupational experience program in developing selected professional competencies for preservice vocational education teachers.

The general objective and design of the study required the development of instruments that might serve to expose relationships between occupational experience and competence among vocational teachers if they existed. The creation of the instruments and the scoring materials (reproduced in Appendixes C and D) designed to accompany them were described in Chapter 3.

Effectiveness of the Instruments

The instruments were tested for effectiveness in a formative fashion by their review by five vocational teacher educators. They were generally satisfied that the instruments would measure what they were supposed to measure (professional vocational education competency) and that they would do it consistantly. Their few suggestions for improvement are reflected in the final drafts of the instruments. A second set of more objective data regarding the effectiveness of the instruments grew out of the results of their employment.

The instruments were used in several tests of comparability between various groups of subjects in the research design. Those comparisons will be detailed later in this chapter. But in addition to the compariability results, those tests also provided a great deal of information about the value of the instruments. In determining the difference between the pretest scores and the post test scores for the laboratory group for the three variables of fluency, quality, and strength, Test 2 showed significant gains, as expected, on the part of the laboratory group subjects. In the assessment of any differences between the laboratory group and the reference group on the pretest, Test 2 illustrated that the fluency, quality and strength scores of the more experienced reference group were higher, as one might predict. The assessment of comparability between test performance and selected demographic variables. While this analysis for Test 1 shows no significant correlations, Test 2 does show many significant correlations, most of them were as one would expect. This further substantiates the appropriateness of Test 2. There is little evidence to support the ability of Test 1 to discriminate between and among groups of subjects in this project. This result should be borne in mind while reading the remainder of this project report.

THE DIRECTED OCCUPATIONAL EXPERIENCE CURRICULUM

The development and implementation of a directed occupational experience program curriculum (in Appendix E) was, indeed, carried out as a part of the activities associated with this project. That accomplishment is chronicled in Chapter 3. Beyond the mere satisfaction of that objective, the project staff was, of course, concerned with the value of the resultant curriculum.

Data gathered in the form of collective reactions from the site coordinators and their students contributed to the belief that the curriculum could in fact develop professional vocational education competence. This casual empiricism was bolstered by the test score improvements made by the laboratory group as well as the correlational data associating the demographic information with test score changes. It is felt that this is a valid and reliable directed occupational experience curricular alternative.

MEASURING THE EFFECTIVENESS OF THE PROGRAM

The major analysis activity in this study involved the evaluation of the effectiveness of the directed occupational experience program. It included three comparative tests utilizing multivariate analysis on the vectors comprising fluency, quality, and strength as well as a correlational analysis examining relationships between student demographic variables and test performance. A test for non-parallel consistency between the two instruments was performed. The instruments failed this test. Because Test 2 consistantly provided statistically significant results and confirmed certain expectations, neither of which was true for Test 1, Test 2 was used as the basis for this evaluation.

As has been noted earlier, certain demographic data was collected from the population members. It would be appropriate to describe those demographic characteristics at this juncture. The information that was collected was age, grade point average, class standing from freshman to senior, hours of occupational experience, hours of professional education, and hours of teaching methods courses. Table 4 presents this data for each group and for each test.

Table 4

SELECTED DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLES

	Age In years	Grade Point Average (1-4)	Class Standing (1-4)	Hours of Occupational Experience	Profession Education Hours (Semester)	Teaching Methods Hours (Semester)
LABPOST						
Test 1	18.2	2.5	2.3	1914	6.1	1.8
Test 2	19.4	2.6	2.8	1683	7.6	1.8
Ref A						
Test 1	21.2	2.6	3.6	4162	12.7	3.4
Test 2	21.5	2.6	3.5	2296	12.7	4.8
Ref B						
Test 1	22.1	2.7	3.8	4390	12.7	4.0
Test 2	21.8	2.8	3.4	3747	10.0	3.1

NOTE: The mean of age, GPA, Profession Education Hours and Teaching Method Hours were estimated from category frequencies. Class standing and Hours of Occupational Experience were calculated from natural numbers.

The laboratory group when compared to the reference group is about one and one half to two and a half years younger than the pooled reference group, a year behind in class standing, and had completed only 50-60% of their educational preparation. All of these are factors that are known to contribute to the quality of performance in academic settings. The laboratory group also fell behind the reference group in occupational experience hours by about 1500-2000 hours. The contribution here to academic performance is less well known, but is plausable as the greater the number of such hours the more matured and experienced the possessor, which is principally what the age and class standing variables signify.

Taken together, the pooled reference group represents more experience and education. In addition its' members have already passed the years of attrition which have yet to select out the less capable of the laboratory group. They should be expected to perform better.

40

The first of the comparisons was of pretest and post test performance by the laboratory group. The results of that comparison are illustrated in Table 5. T-tests showed significant gains at the .05 confidence level on each of the three variables on the post test. This is an expected result and indicates that the curriculum is capable of fostering competency acquisition by students over time in a directed occupational experience program.

Table 5

COMPARISON OF PRE-TEST LABORATORY GROUP
AND POST-TEST LABORATORY GROUP PERFORMANCE ON TEST 2

Variable/Group	$\bar{X}$	SD	t	p
Fluency/				
Pre-test	325	56	2.35	.007
Post-test	276	55		
Quality/				
Pre-test	433	52	2.23	.032
Post-test	463	43		
Strength/				
Pre-test	369	56	2.82	.008
Post-test	416	47		

NOTE: N = 17 for pre-test group and 20 for post-test group.
Degrees of freedom were 35 (for tests of significance).

A second comparison test was run between the pretest performance results of the laboratory group and the reference group. The specific results of that comparison for Test 2 are shown in Table 6. In the cases of fluence, quality and strength, the reference group t-test scores were significantly higher than the laboratory group on Test 2. Because the reference group was older, had more occupational experience, higher class standing, etc., it was expected that their vocational education competencies would be higher as well. That expectation is borne out in the results of this comparison.

Table 6

COMPARISON OF THE PRETEST LABORATORY GROUP AND THE REFERENCE GROUP ON TEST 2

Variable	Pretest Group		Reference Group			
	$\bar{X}$	SD	$\bar{X}$	SD	t	p
Fluency	325	56	385	46	3.61	.001
Quality	434	52	477	34	3.03	.005
Strength	367	56	424	33	3.76	.001

NOTE: N = 17 for the pretest laboratory group and 20 for the reference group. Degrees of freedom for tests of significance were 35.

The third comparison was of the post test scores of the laboratory and the reference group. The results of that comparison are illustrated in Table 7. Predictably, a t-test showed no significant difference in vocational education competence between the two groups on Test 2 after the laboratory group had been subjected to the directed occupational experience program. In this case alone, the results on Test 1 are concurrent. However, based on the previously suspected invalidity, this result must be discounted.

Table 7

TEST BETWEEN LAB POST AND REF

Test 2 (t = 3)	$\bar{X}$	s	t	df	t = .027
Fluency			.53	38	p = .60
LAB POST	376	55			
REF	384	46			
Quality			.69	38	p = .43
LAB POST	368	43			
REF	477	34			
Strength			.62	38	p = .54
LAB POST	416	47			
REF	424	33			

A further substantiation of the worth of Test 2 and the investigation of general contributing factors of competence proceeded in a correlational study of the relationship between test performance and the selected demographic variables. Table 8 presents the results of these analyses for Test 2.

Table 8

CORRELATIONS BETWEEN TEST PERFORMANCE AND SELECTED DEMOGRAPHIC VARIABLES

Test 2 (t = 18) (LABPOST + REF) a = .003

	Fluency	Quality	Strength
Age	*	.39	.37
Grade Point Average	.40	.37	.42
Class Standing	.36	.39	.39
Hours of Occupational Experience . .	*	*	*
Professional Education Courses . . .	.35	.45	.41
Teaching Methods Hours	*	*	*

N = 40
NOTE: Number of correlations computed was 18. Alpha Level for tests of significance was set at 1 = .003. * indicates a non-significant correlation.

Several significant correlations are shown. Most of them are where one would expect them to be. Age, Grade Point Average, Class Standing, and Hours of Professional Education are all significantly correlated with test scores. These are all variables that are known to consistantly correlate with academic achievement or known to designate a level of accomplishment. In view of these expected results, the absence of any correlation with hours of occupational experience is conspicious. Statistically, since this demographic variable was continuous whereas all the rest were categorized, it had the best chance of showing a correlation, if one existed.

The information of the correlation of the demographies with test performance adds to the confirmation of the value of the directed occupational experience curriculum. The laboratory group is known to be younger than the reference group, a year behind in class standing and about three to six hours behind in hours of professional education courses completed. All of these are factors that would give the reference group members superior chances for better performance. Yet the laboratory group scored at the same level upon completion. The fact that the laboratory group had substantially less hours of occupational experience did not prove to be a disadvantage on the measures of vocational education competence.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The general purpose of this study was to examine the relationship between types of occupational and professional competence among vocational teachers. It was conceived to discover if directed occupational experience was an effective alternative strategy for the development of selected professional educational competence. The first of the specific objectives of the study was to develop and test instruments to measure the extent to which preservice vocational education teachers' occupational experiences contributed to the development of professional educational competencies.

To accomplish this objective, a professional competence examination was developed. It was designed to measure the effectiveness of varying types and amounts of occupational experiences in developing professional competencies of preservice vocational education teachers. Twelve general competency areas were covered in two tests which have been earlier described and which are reproduced in the appendix to this report. The tests were labeled Test 1 and Test 2. Test 1 did not prove to have discriminatory powers or validity in measuring the acquisition of professional vocational competence. Test 2, however, provided convincing evidence of its ability to discriminate between individuals and groups who had acquired certain professional education competencies and those who had not.

The second of the specific objectives of this study was to develop and implement a directed occupational experience program for preservice vocational education teachers. In accomplishing this objective, a modular or packaged directed occupational experience program was developed that included the administrative and instructional materials. Data were gathered in the form of collective reactions from the coordinators and their students regarding the appropriateness and usefulness of the directed occupational experience curriculum. Their opinions, supported by test score improvements made by the laboratory groups, as well as the correlational data associating the demographic information with test score changes contributed to a belief that the directed occupational experience curriculum was indeed a useful one in the development of professional vocational education competencies.

The third of the specific objectives required the evaluation of the effectiveness of the directed occupational experience program in developing selected professional competencies for preservice vocational education teachers. This was accomplished through the operation of the directed programs at selected teacher education institutions with reference groups of preservice vocational teachers selected to participate at each site. Data were collected through a pretest administered to the laboratory group and a post test administered to the laboratory group and the reference group after the administration of the directed occupational experience program. The data that were analyzed determined that the directed occupational experience was effective as a method of competency development for preservice vocational education teachers.

More specifically; on a comparison of pretest and post test performance by the laboratory group, t-tests showed significant gains at the .05 competency level on each of three variables on the post test. A second comparison between the pretest performance results of the laboratory group and the test of the reference group showed that the t-test scores of the reference group were significantly higher than the laboratory group on Test 2. This was an expected result because the reference group was older, had more occupational experience, higher class standing, and so forth. The third major comparison was between post test scores of the laboratory group and the test scores of the reference group. The results of that comparison showed no significant difference in professional vocational education competence between the two groups. This outcome tends to illustrate that students in the laboratory group gained knowledge to the extent that their competence was equivalent to a reference group who already had amassed occupational experience in the traditional fashion. Finally, a correlational study about the relationship between test performance and the selected demographic variables was run, with the results from this study, showing several significant correlations for Test 2. Most of them were in expected categories such as age, grade point average, class standing, and hours of professional education. All of these demographic variables correlated significantly and positively with test scores. This result tends to substantiate the worth of Test 2 and to confirm the value of the directed occupational experience curriculum. The laboratory group, as was noted earlier, is younger, lower in class standing, and behind in hours of professional education courses. Yet the laboratory group scored at the same level on completion of the directed occupational experience program. The fact that the laboratory group did not have as much occupational experience did not prove to be a disadvantage on the measures of vocational education competence.

CONCLUSIONS

Several conclusions are possible growing from the results of this investigation. First of all, it can be concluded that it is feasible to develop a test of occupational competence that discriminates between and among those with different amounts of occupational competence. Test 2 seems to have that ability.

A second conclusion one could draw is that a curriculum to supplant or supplement actual clock hour occupational experience can be developed and is effective in the development of competencies in the realm of professional vocational education.

A third conclusion that could be supported from the findings in this study is that preservice vocational education teachers can acquire required professional vocational education competencies through a combination of the prescription and utilization of a modular competency-based curriculum and fewer clock hours of occupational experience.

RECOMMENDATIONS

The investigator would like to set forth certain recommendations that have grown from the experience acquired in the management and operation of this study. The first of those recommendations is that further work be done on Test 1 to determine if the inability of Test 1 to discriminate between and among groups having various levels and varieties of occupational experience is the fault of the test itself or is perhaps the fault of some other variable such as the instructional modules designed to develop the competencies that were measured in Test 1.

A second recommendation would be to utilize the modular curriculum in a variety of other settings. These other settings might include additional sites, and additional or different vocational education disciplines. This activity would result in more data regarding the usefulness and effectiveness in the development of professional vocational education competence.

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Appendix A

Dictionary of Competency Breakdowns

Competency: A-1 Conduct an Occupational Analysis

Explanation: Assuming that a vocational curriculum should, in part at least, arise from the requirements of business, the activity of occupational analysis is easily justified. Studying the skills, knowledges, and attitudes required of workers is a first step in the planning of vocational teachers.

There are numerous occupational analysis, job analysis or task analysis formats described in the literature. (They are each useful in various settings and for various purposes.) The objectives selected from the above competency for this module provide you with a generally useful occupational analysis format. It asks you to analyze a job in your own place of employment--either your own or a co-worker's job. Once you have finished this module, you will be prepared to analyze any of your students' occupations. Used properly, these analyses will assure relevance and accountability in your vocational instructional program.

Selected Key Objectives: Given an occupational analysis format, the teacher will analyze an occupation or job where (s)he is employed.

Other Activities That Could Have Been Developed From The Competency:

(1) Study different types of occupational analyses and select or create one appropriate for use in vocational education.

Tasks: Observe and analyze a job.

Combine data into an occupational analysis.

Skills: Ability to observe relevant components of a job.

Ability to list and verify task and duty statements.

Ability to write a logical analysis of the task inventory data in a logical format.

Items of Knowledge: Understanding of value of occupational analysis.

How to use an occupational analysis format to study an occupation. Select circumstance and format, give facts.

Knowledge of the scope of an occupational analysis. Select circumstance and format, give facts.

Probable Settings: Employer's Business, Office

Competency: A-2 Develop vocational education program goals and objectives

Explanation: For reasons of accountability and program legitimacy, vocational education programs must be built upon goals and objectives. Program goals are those broad statements of purpose growing from the community survey. They state, in general terms, what the community and clientele can expect from the vocational education program.

Program objectives are more specific statements evolving from goals. Objectives state in more specific, operational and performance-based terms what the students will be capable of doing upon exiting from the program. They are the raw materials from which curriculum is built.

Every vocational education teacher should be familiar with program goals and objectives. This module will provide you with that acquaintance.

Selected Key Objective: Based on the knowledge possessed of the business community in which the teacher works, the teacher will develop an appropriate broad vocational education program goal and three attendant program objectives.

Other Activities That Could Have Been Developed From The Competency:

(1) Refine goals from a community survey.

(2) Ask employers to react to program goals and objectives.

(3) Speak to the appropriateness of several goals in terms of a specific community.

(4) Develop objectives from given goals.

Tasks: Develop one goal.

Develop three performance-based objectives.

Skills: Synthesis of community survey data.

Writing performance-based objectives. (prerequisite skill)

Items of Knowledge: Of community survey data.

Nature and purpose of goals.

Probable Settings: Office

Competency: B-1 Write student performance objectives

Explanation: Little standardized curriculum exists in vocational education. Rather, the changing nature of society and its employment requirements and the changing career interests of students require that new vocational curriculum be developed constantly. It follows, then, that the well-prepared vocational teacher must possess the curriculum development skills.

The development of performance-based objectives, while a rather simple skill, is an activity which the vocational teacher is frequently required to perform. The objective in this module asks you to demonstrate this very important curriculum development skill.

Selected Key Objective: The teacher will be able to write three performance-based objectives appropriate for on-the-job instruction at the teacher's place of employment.

Other Activities That Could Have Been Developed From The Competency:

(1) Analyze objectives to determine if they contain Mager's three criterion components.

(2) Differentiate among objectives written--the cognitive, affective, and psychomotor domain.

(3) Sequence a list of instructional objectives.

Tasks: Analyze employment requirements at place of employment to determine three separate job performances.

Write three objectives that include performance, conditions, and criterion statements and reflect the job requirements at the place of employment.

Skills: Ability to generally state job requirements.

Ability to write objectives.

Items of Knowledge: Understanding of job requirements at the place of employment.

Knowledge of three components of a properly written performance-based objective.

Probable Settings: Employment Business, Office

Competency: 8-2 Conduct individual and group field trips

Explanation: A vocational educator must use a wide variety of instructional techniques in the development of competence in students. Many of these techniques require some direct contact with the employment community. One technique that is especially useful in this regard is the field trip.

Through a field trip experience a vocational student can see and experience first hand, the realities of numerous aspects of the employment environment. Students are able to involve multiple senses and are apt to remember and be able to apply what they learn on a well-planned field trip.

Only a carefully conceived field trip, growing from curricular objectives, will have enduring results. Part of that conception must involve planning with the persons in charge at the site of the trip. This module requires you to involve a business in the planning of a field trip.

Selected Key Objective: Given a curricular objective, the teacher will plan, with a business person, a schedule of events to take place during a group field trip to a business.

Other Activities That Could Have Been Developed From The Competency:

(1) Develop a set of administrative procedures for conducting a field trip.

(2) Develop a student follow-up exercise to a field trip.

(3) Plan and direct a field trip.

Tasks: Analyze the given objective for possible employment site objectives.

Meet with employer to determine experiences available at the site that could provide knowledge, skills or attitudes that would help satisfy the objective.

Sequence the events during the field trip to achieve the objective.

Skills: Ability to contact and convince employer to host a field trip.

Ability to match objectives with experiences available at an employment site.

Items of Knowledge: Knowledge of how experiences or situations at an employment site can contribute to the satisfaction of objectives.

Probable Settings: Employers Business

Competency: C-1 Establish criteria and guidelines for initiating a cooperative vocational education program

Explanation: Any program in a developmental stage will profit from adherence to guidelines and criteria during its development. This is contrasted to a haphazard mode of development based upon the whims of a developer. These criteria will give the program planner a road map and a set of bench marks for program development. It will assure that all aspects of the program are in concert with one another and tied to the same goals.

Program criteria and guidelines provide a common reference point for many publics with interest in the cooperative program. It becomes, in effect, a policy justifier for students, parents, administrators, business-persons, and taxpayers, generally.

These program criteria and guidelines serve yet another purpose. They are the stuff from which objective-based evaluation can be completed. This kind of evaluation can add immeasurably to program accountability.

Selected Key Objectives: Given a set of tentative criteria and guidelines for operating a cooperative vocational education program, the teacher will verify their appropriateness with a potential employer in a cooperative education program and either accept or reject the employer's suggestion for change providing a rational for each choice.

Other Activities That Could Have Been Developed From The Competency:

(1) Develop criteria and guidelines for operating a cooperative vocational education program.

(2) Develop criteria for screening students for acceptance into a program.

(3) Develop criteria for establishing a training station.

Tasks: Study criteria and guidelines.

Take criteria and guidelines to employer for a reaction.

Weigh reaction and accept or reject developing a rationale for either choice.

Skills: Interviewing employer.

Developing rationale based on knowledge of coop program.

Items of Knowledge: Acquaintance with the objectives of cooperative vocational education.

Probable Settings: Employer's Business, Employment Community

Competency: C-2 Identify and secure prospective training stations

Explanation: The cooperative vocational education training station is the business setting that becomes the vocational laboratory for students in a cooperative education program. It is important that this laboratory be an appropriate one. Appropriateness is measured with many criteria. This module asks you to apply those criteria to several businesses in the selection of training stations for a portion of a hypothetical group of students.

Selected Key Objectives: With a list of ten hypothetical students with different characteristics and career objectives and a set of training station eligibility criteria, the teacher will select appropriate training stations for five of them from among businesses in the employment community.

Other Activities That Could Have Been Developed From The Competency:

(1) Convince an employer to agree to allow his/her business to serve as a training station.

(2) Develop a set of criteria for training station selection.

(3) Examine several and select one set of criteria for training station selection.

Tasks: Examine training station criteria.

Learn student characteristics and career objectives.

Contact and interview businesspersons, managers, and potential training sponsors to determine their appropriateness as training stations.

Skills: Ability to contact and interview subjects.

Assess training capability of training station.

Items of Knowledge: Understanding of the concept of career objective.

Knowledge of the role of the training station in cooperative education.

Probable Settings: Employment Community, Office

Competency: C-3 Develop the training ability of on-the-job instructors

Explanation: The on-the-job instructor or training sponsor is an important component in any cooperative education program. This is the person who oversees the instruction that occurs on the job and assures that the instruction is relevant, appropriate, and educationally accountable. The on-the-job instructor is the laboratory instructor for the school.

It is imperative that the on-the-job instructor have the ability to provide training to student trainees. These abilities include an understanding of the fundamentals of curriculum and instruction. Training sponsors development is the cooperative vocational education teacher's responsibility. This module requires you to describe, assess and critique the training you were given on the job for your present job and develop a list of instructional skills from which you think your employer might profit.

Selected Key Objective: The teacher will develop a description, assessment and critique of the training received in his current job. From that description a list of instructional skills from which his employer might benefit will be developed.

Other Activities That Could Have Been Developed From The Cometency:

(1) Solutions of a series of case problems illustrating inadequate instructional skills possessed by on-the-job instructors.

(2) The creation of a complete training sponsor development program.

Tasks: Analyze training received in current job.

Apply criteria for appropriate instruction (supplied) to the analysis.

Prescribe a list of instructional skills from which the on-the-job instructor could benefit based on the application of the instructional criteria.

Skills: Matching criteria to experience.

Items of Knowledge: Of training received on job.

Of how to apply criteria for appropriate instruction.

Probable Settings: Employers Business, Office

Competency: C-4 Develop training agreements and training plans for placing students on the job

Explanation: The unique feature of the cooperative method in vocational education is the student at work in a training station. Too often that work experience suffers from inadequate planning and control. Without the safeguards of planning and control the students' experience frequently degenerates into a monotonous collection of days at work with no competency development.

The remedy to this problem is, of course, good planning and control of the work experience. In cooperation with the training sponsor at the training station, the development of training agreements and training plans that are educationally sound contribute positively to the vocational education experience of the trainee.

The objective in this module encourages you to work with the owner or a manager in your place of employment to develop a cooperative education training agreement and training plan.

Selected Key Objective: Working cooperatively with an employer or manager at your place of employment, develop a training agreement and a training plan suitable for use with a cooperative education student in that business.

Other Activities That Could Have Been Developed From The Competency:

(1) Create a general form for a training agreement and training plan for use in any cooperative education program.

(2) Given a set of career objectives for several vocational students, describe part-time cooperative jobs that would be appropriate placement for those students.

(3) Locate existing training agreements and training plans and revise them.

Tasks: Develop a cooperative education training agreement outlining the responsibilities of the teacher-coordinator, the training sponsor, the student and the parents or guardians.

Create a cooperative education training plan for the development of vocational competency in a part-time job.

Skills: Curriculum development.

Items of Knowledge: Understanding of the legal responsibilities of the four parties to a training agreement.

Knowledge of the information required on a training plan.

Understanding of what each of the parties agrees to on a training plan.

Knowledge of basic components of curriculum.

Know how the career objective relates to a training plan.

Know how the notion of a career objective relates to a training plan.

Probable Settings: Employer's Business, School

Competency: C-5 Coordinate and supervise on-the-job instruction

Explanation: Coordination and supervision of on-the-job instruction are the main out-of-school activities of the teacher-coordinator of a cooperative vocational education program. The terms "coordination" and "supervision" cover a wide variety of professional tasks related to assuring that the on-the-job training experience of students is educationally valuable. Some of these coordination and supervision activities are observing students on the job, planning schedules of coordination visits, assuring safe working conditions exist for students, working to solve student-learner problems, working with training sponsors to assure adherence to training plans, as well as many other activities.

One activity in which you can involve and learn from employers is the solution of student problems on-the-job. Specifically, this module asks you to work with your employer in the development of a solution to a problem that a student is having on the job.

Selected Key Objective: Given a set of policies for on-the-job instruction, the teacher will involve an employer in the solution of a student problem originating on-the-job.

Other Activities That Could Have Been Developed From The Competency:

(1) Planning a check list for observation of students' performance on-the-job.

(2) Develop a set of safety requirements for training stations.

(3) Develop a system to assure training sponsor compliance with training plans.

(4) Maintain a set of forms for the orderly supervision and coordination of on-the-job instruction.

(5) Develop a set of policies for on-the-job training.

Tasks: Study policies for on-the-job instruction.

Analyze student problem in relation to applicable policy.

Involve employer in the solution of the hypothetical problem.

Skills: Problem solving steps.

Items of Knowledge: How cooperative education policies are applied to on-the-job instruction.

Probable Settings: Employer's Business

Competency: C-6 Evaluate students on the job

Explanation: Evaluation or measurement of movement toward goals is the step in curriculum development and instruction that lends credence to education. Since vocational educational goals are stated and educational credit is offered for on-the-job training in cooperative education, measurement of the achievement of these goals and accountability for the credit provided is mandatory.

Parenthetically, it is a well-known principle of human behavior that people tend to support that which they help to create. In that regard, it is useful to involve the training sponsor in the development of training plans for students including the evaluation portion.

The objective in this module suggests you (with the cooperation of a training sponsor) develop an evaluation strategy for a hypothetical training plan.

Selected Key Objective: Given a cooperative education training plan, complete with competence, objective, subject matter and activities, the teacher, with the help of an employer, will develop an appropriate evaluation instrument for a student on the job.

Other Activities That Could Have Been Developed From The Competency:

(1) Development of a general or standardized evaluation instrument for on-the-job training.

Tasks: Involve a training sponsor in the selection of an evaluation instrument for a training plan.

Develop a job specific evaluation instrument.

Skills: Ability to extract performance, conditions, and criteria from an objective.

Ability to describe possible evaluation instruments appropriate of an evaluation strategy.

Instrument construction.

Items of Knowledge: Understand the purpose and function of a cooperative education training plan.

Familiarity with the role of a training sponsor at a cooperative education training station.

Probable Settings: Employer's Business, Office

Competency: D-1 Provide service to and maintain liaison with the community

Explanation: All vocational programs and vocational educators function within some community. That community usually provides fiscal support for the program, input to the vocational curriculum, and employment for graduates of the program. It is important for the vocational program and vocational educators to provide various communication conduits between the community and the program. These conduits might include newsletters, surveys, open houses, or news media. They would carry information about such things as program goals, employment data, student interests, and new developments in business.

In addition, as the academic center of the business community, the vocational program carries with it some responsibility for the continuing education of members of the business community. The objective, cited below, chosen for this competency combines the service and liaison components of the competency when it asks you to conduct an abbreviated needs assessment and develop a subject matter outline for a business-oriented adult education workshop. This will develop skill and experience in needs assessment (a useful skill in vocational education) and in providing service to the business community.

Selected Key Objective: After conducting an abbreviated needs assessment, the teacher will develop a subject matter outline for a one-day adult education workshop for members of the business community

Other Activities That Could Have Been Developed From The Competency:

(1) Prepare a newsletter regarding a vocational program for the business community.

(2) Plan and conduct an open house, a businessperson's open house, in the vocational program.

(3) Utilizing help from vocational students, conduct a market activity for the business community.

(4) Provide an employment service in the school to serve the business community.

(5) Serve in community, civic, or professional organizations.

(6) Plan an employer-employee function for a cooperative education program.

(7) Develop a media campaign describing the vocational program.

Tasks: Conduct a needs assessment and tabulate, synthesize and report results.

Prepare a subject matter outline for a one-day adult education workshop.

Skills: Questionnaire writing

Data Collection (sampling)

Logical analysis of data

Items of Knowledge: Uses of surveys

Purposes of needs assessments

How to tabulate, synthesize and report results

Probable Settings: Employment Community, Office

Competency: D-2 Develop a plan for school-community relations

Explanation: It could be said that the cooperative vocational education program exists at the pleasure of the community. The concept of "community" can be interpreted very loosely or very narrowly. In its broadest sense, "community" would include all of the people remotely touched by a cooperative vocational educational program. In the more narrow sense it might be limited to certain publics directly concerned with the program.

A good teacher-coordinator of a cooperative program develops a plan with several strategies for improving relationships between the school program and the community. These strategies usually are in the form of information-dissemination activities. This module asks you to develop one informational medium designed to provide periodic information about the vocational program to the business community.

Selected Key Objective: The teacher will develop one informational medium designed to provide periodic information about the vocational program to the business community.

Other Activities That Could Have Been Developed From The Competency:

(1) An informational meeting could have been planned and conducted.

(2) Develop a complete plan for disseminating vocational program information to the community.

(3) React to the appropriateness of an existing school-community relations plan.

Tasks: Collect and write information to be included in a medium for use in a school-community relations effort.

Skills: Organization

Writing

Items of Knowledge: Knowledge of rationale for and objective of a school-community relations program.

Probable Settings: Office

Comptency: E-1 Keep up-to-date in your occupational specialty

Explanation: One of the requirements of a cooperative education teacher-coordinator is to maintain a dynamic technical knowledge of his occupational specialty. Among the most important reasons for the maintenance of this knowledge is to assure currency of information in the cooperative education related class. A good vocational education teacher must have up-to-date technical knowledge.

Another set of reasons for keeping occupationally current clusters around the notion of credability. Students tend to react more favorably to teachers who are able to provide current examples from the employment community to supplement their instruction. Employers, advisory committee members and others tend to appreciate cooperative education teachers who maintain a high level of interest and understanding in their specialty. Most vocational education teachers are required to have occupational experience. The development of habits in this class that keep you constantly up-to-date will be an asset throughout a career in vocational education.

Selected Key Objective: Using information contained in one year's edition of Business Week, Wall Street Journal, Fortune, or some other institutional periodical, the teacher will be able to describe a current trend and tell how that trend will affect their employer's business.

Other Activities That Could Have Been Developed From The Competency:

(1) Summarize several articles from employment-related journals.

(2) Report upon visits to several different businesses.

(3) Attend and report upon seminars designed to update personnel in your occupational specialty.

Tasks: Read (or skim) one year's issues of a current employment related periodical.

Determine a trend affecting the teacher's place of employment.

Write a short paper describing how that trend will affect the teacher's employer.

Skills: Reading for trends

Writing

Applying a trend to a specific business

Items of Knowledge: How to determine a trend

Probable Settings: Office

Competency: F-2 Organize and maintain the vocational laboratory

Explanation: In some vocational education programs the laboratory is the focal point of the instructional activity. It is the place where students are able to put into practice those theoretical concepts they acquire in class.

In many programs the laboratory is physically extensive and impressive as well. Organizing and maintaining the vocational laboratory is a major portion of many vocational teachers' jobs.

This module will allow you to utilize your on-the-job experience to develop skill in the organization and maintenance of a vocational education laboratory

Selected Key Objective: Based on a knowledge of real work settings the teacher will develop and support a layout of a laboratory for a vocational education program.*

Other Activities That Could Have Been Developed From The Competency:

(1) Evaluate a laboratory.

(2) Develop a budget for the acquisition of a laboratory.

(3) Ask for the help of an employer in developing a laboratory.

Tasks: Go to six businesses and examine their equipment and layout.

Develop a layout of an appropriate laboratory.

Prepare a rationale for each item on the layout.

Skills: Synthesis of data collected at the locations.

Creating a paper layout.

Items of Knowledge: Of utilization of laboratory in a vocational education program.

Probable Settings: Employment Community, Office, School

*The student should visit six "real" businesses and then prepare a layout of of a planned laboratory for the vocational program of his or her choice. Then the student should develop a brief explanation, or rationale behind the choice of each item in the laboratory.

Competency: F-3 Direct Student Laboratory Experiences

Explanation: The vocational education laboratory is an integral part of many vocational education programs. It is the semi-realistic environment created for students to apply their vocational understanding in a low-risk setting.

The development of student activities and projects for the vocational laboratory is as important as the development of curriculum for large-group instruction. This module will provide you with experience in the preparation of one appropriate student experience suitable for completion in a vocational laboratory.

Selected Key Objective: The teacher will select a required competency from his/her place of employment and develop a laboratory activity designed to develop that competency. The activity should meet all of the standards of curriculum development.

Other Activities That Could Have Been Developed From The Competency:

Tasks: Select a competency for the job and create a laboratory activity designed to develop that competency.

Skills: Curriculum development

(objectives, activities, evaluation, etc.)

Items of Knowledge: Steps in curriculum development

Probable Settings: Employer's Business, Employment Community, Office

Competency: G-7 Assist Students in Applying for Employment or Further Education

Explanation: As a vocational education teacher, one of your responsibilities is to help each of your students develop occupational competencies that are saleable in the job marketplace. Your students spend periods of time ranging up to several years acquiring these skills.

Your final responsibility in your students' career development is to help them when applying for employment or further education. This module will provide you with experience in doing that.

Selected Key Objective: The teacher will write a letter of recommendation for a hypothetical student thought to be applying for a job at the teacher's current place of employment.

Other Activities That Could Have Been Developed From The Competency:

(1) Help a student fill out an application blank.

(2) Develop a list or folder of educational and vocational opportunities for program graduates.

(3) Help a student prepare a resumé.

Tasks: Examine hypothetical materials (data) as a student (school transcript, family history, job history, cumulative file, etc.).

Write a letter of recommendation.

Skills: Information synthesis from materials

Language

Items of Knowledge: Of appropriate points and characteristics to emphasize in a letter of recommendation.

Probable Settings: Employer's Business, Office

Competency: H-1 Organize or Reorganize an Occupational Advisory Committee

Explanation: The lay advisory committee is the main link between the vocational education program and the community that it serves. It is a group of citizens with an interest in vocational education who provide advice regarding the appropriateness of various aspects of the program, give assistance to the program, and serve as a liaison between the program and the community it serves.

More specifically, the vocational advisory committee can help to keep a curriculum current, react to course objectives and advise on the acquisition of instructional materials and hardware. The committee members can also help to describe the program to the community, serve as resource speakers in classes and help to evaluate the effectiveness of the program.

The vocational advisory committee is made up largely of businesspersons and employers like your own. Your employment relationship will allow you a special perspective through this module on a businessperson's involvement in an advisory committee.

Selected Key Objective: After providing an employer with information about the activities of a vocational education advisory committee, the teacher will obtain responses from the employer on an opinionnaire dealing with advisory committees.

Other Activities That Could Have Been Developed From The Competency:

(1) Selection of a series of mythical advisory committee members.

(2) Development of a set of advisory committee agendas.

(3) Compilation of a list of advisory committee activities.

Tasks: Present the employer with the information on advisory committees.

Convince the employer to respond to the opinionnaire.

Skills: Skill in convincing the employer to listen to or read the advisory committee material and to respond to the opinionnaire.

Items of Knowledge: Of the purposes and functions of advisory committees.

Probable Settings: Employer's Business

Competency: H-2 Maintain an Occupational Advisory Committee

Explanation: The organization of a vocational education advisory committee is only the first step toward the development of a useful and valuable helping hand for the vocational education program. Some advisory committees never get beyond the first organizational step.

Good advisory committees have usually a vocational teacher who has an active role as a facilitator and maintainer of the advisory committee's activities and functions. This module will help to prepare you for that role.

Selected Key Objective: The teacher will develop a vocational education advisory committee meeting agenda with at least eight points. The agenda should carry the reaction and approval of the teacher's employer.

Other Activities That Could Have Been Developed From The Competency:

(1) Develop a one-year program of work for the vocational education advisory committee.

(2) Prepare a system of rotating membership for advisory committee membership.

(3) Develop a set of objectives for advisory committee membership.

(4) Create a set of rules of procedures for the operation of an advisory committee.

Tasks: Weigh possible activities appropriate for advisory committee activity.

Elicit employer's reaction to the hypothetical agenda.

Skills: Agenda organization.

Items of Knowledge: Of activities that are appropriate agenda items for an advisory committee.

Probable Settings: Employer's Business, Office

Competency: I-1 Establish Criteria for Student Performance in a Vocational Education Program

Explanation: By its very nature, a vocational education program demands teacher and student accountability in terms of student performance. This performance or performance level is usually determined by performance levels required of workers on the job.

As a pre-service teacher, and as an employee of a real business, you are in a unique position to gain a perspective on what performance levels for students should be. The module will provide you with experience in responding to these performance levels.

Selected Key Objective: Given a performance level for typewriting or cash register operation, the student will verify the appropriateness of the level based upon conditions existing in at least five businesses.

Other Activities That Could Have Been Developed From the Competency:

Tasks: Verify performance levels on a typewriter or a cash register in at least five businesses.

Skills: Questioning

Items of Knowledge: Of the concept of performance levels

Of a rudimentary verification process

Probable Setting: Employment Community

Competency: I-2 Evaluate your Vocational Program

Explanation: The reasons for evaluating vocational education programs for their effectiveness and efficiency are varied, numerous, and convincing. No committed vocational educator is against program evaluation. How else can we know whether or not the vocational program is producing results that are consistant with the objectives?

This module will provide you with experience in the development of an instrument designed to collect evaluation data from businesspersons whom the program serves.

Selected Key Objective. Given a set of program objectives, the teacher will develop an evaluation data collection instrument based on those objectives for businesspersons whom the vocational program serves.

Other Activities That Could Have Been Developed From The Competency:

Tasks: Develop a questionnaire based upon program objectives.

Skills:

Items of Knowledge: Of questionnaire development (already possess)

Probable Settings: Office, School

Appendix B

The Instrument Development and Scoring Model

The Instrument Development and Scoring Model

The principal condition controlling the design and development of the instruments by which the growth in professional competence would be measured was a time constraint. It was judged that the test should be limited to one hour. A longer period, it was thought, would endanger the prospect of cooperation by reference group members who would be giving of their time outside of the formal context of course and grade sanctions. Forming a separate scale for each of the twenty competencies in the instructional package was out of the question. In a sense, this would have been a trivial measurement anyway as each instructional module contained performance tasks and evaluation checklists. Some degree of attainment would undoubtedly show on behaviors already taught and practiced. It is possible, however, to look for other effects by a second order logical analysis of the task performances which comprise the representative set of behaviors classified under the competency.

A task performance can be broken down into a set of elementary tasks, skills, or items of knowledge, just as a competency can be broken down into objective capabilities and task performance. Among similar tasks performances, some of these elementary tasks, skills or items of knowledge will be unique to the task to which they belong, and others will occur in more than one task. Across the similar tasks there will be a separation of those properties that will be specific to an individual task and those properties that are in some degree general to the entire set. A second order analysis retains the common degree and drops away the special cases. The constructs formulated on the second order are fewer in number than are the individuals comprising the first order, e.g. the task performances representative of the twenty competencies. Consequently, they can be measured with greater economy. By using this approach, two tests composed of six tasks were developed. Although tht tests are non-parallel in content, both produce values for derived scales that are comparable between tests.

The second order reduction also makes the comparison between the laboratory group and the reference groups formed in response to the evaluation model fairer and truer. The groups can be naturally expected to differ in first order special capabilities; their histories and education differ in special ways and consequently the special learnings among them will be unevenly distributed. The special forms of learning taught in the instructional modules represent one sort of special learning, but this is not to say that the reference groups were learning special capabilities of value though of somewhat different form and particularity. A first order measurement would be biased against the reference group.

In terms of the first order, the goals of the laboratory approach are the acquisition of the key objectives from a corresponding set of twenty professional competencies. In terms of the second order, the goal is growth and attainment in general professional competence in doing what the students are being trained to do as a professional vocation. This is shared with the reference groups. Whatever is happening to them in the name of formal education is also expected to promote this general professional competence to its greatest extent in the time allowed by the undergraduate program prior to entry into the field and the stimulus of first hand experience. The second condition controlling the design and development of the instruments of measurement was the requirement that the stimulus tasks and the properties of the performance measured be representative of the general professional competence expected of graduates from any of the comparison groups.

The source document to which the measures are keyed is the Dictionary of Competency Breakdowns (Appendix A), the production of which was described earlier. The elements which were introduced into the analysis were the tasks and skills sections of the breakdowns. From these, tasks and skills were selected and composed into problems that covered capabilities, such as the depth and accuracy of one's occupational knowledge or formulating objectives that are consistent and to the point, that were central to professional competence in the field of vocational education. Two non-parallel tests were developed because even with the second order reduction, the content areas still needed ten to twelve representative problems, enough for about two hours of responding time.

Drafts of both tests were given to five experts in the field who responded to the problems and supplied additional comments on the clarity and appropriateness of the tests' contents and instructions. The tests were revised in light of the wisdoms uncovered by this pilot and review procedure. A scoring instructions and recording booklet was developed for each test and reproduced in quantities sufficient to provide one for each returned and completed test.

Each returned test was coded as to site, test number and comparison group. The student's social security number served as the test's individual identification number. All the returned tests were pooled and randomly given to scorers who had been previously trained in the scoring method. The inter-scorer variability is considered to be controlled through this randomization. All test data was entered onto disk files and sorted by test.

The Structure of Data

Each test was composed of six tasks. The responses to several of these were measured for more than one property. Several of these properties were measurable on more than one task. Diagramatically this situation looks like this:

Tasks	Properties					
	P_1	P_2	P_3	P_4	P_5	P_6
T_1	X	X				
T_2		X	X	X		
T_3	X				X	
T_4	X	X	X			
T_5		X				
T_6	X		X			X

Most of the data were frequency values or ratios of counts of response judged valid or correct to total frequency counts. Since values obtained in these ways were not dichotomous, binary response scoring models were not appropriate. Each stimulus problem. instead, evoked a complex response. The scales measuring properties of the response were based upon either natural number systems or real number systems. Tables 1 and 2 in this appendix give the list of data elements for Tests 1 and 2 respectively. The sections that follow the tables present the scoring model and procedures used to produce the scores used in the comparisons between groups.

Table I

Data Elements for Test 1 Data

Variable Name	Task #	English	Field Width	Importance
SS #	--	Social Security #	9	--
Test Code	--	Test Code	3	--
LvlOrg	1	Level of Organization	1	Secondary
D	1	# of duty statement	1	Secondary
T	1	# of task statements	1	Secondary
E	1	# of ends statements	1	Secondary
V1	1	First volume estimate	2	Primary
Vn	1	Logical Expansion index	5.2	Primary
Vɇ	1	Partial Expansion index	5.2	Secondary
Vθ	1	Partial Expansion index	5.2	Secondary
Đ	1	# of invalid duty statements	1	Secondary
Ŧ	1	# of invalid task statements	1	Secondary
Ɇ	1	# of invalid ends statements	1	Secondary
Labels	1	Labels statements	1	Secondary
Va 1	1	First Validity estimate	3.2	Primary
Va 12	1	Partial Validity estimate	3.2	Secondary
Va 13	1	Partial Validity estimate	3.2	Secondary
Va 14	1	Partial Validity estimate	3.2	Secondary
V 2	2	Second Volume estimate	2	Primary
Va 2	2	Second Validity estimate	3.2	Primary
Lvl 2	3	Level 2 present	1	Secondary
V 3	3	Third Volume estimate	2	Primary
V 4	3	Fourth Volume estimate	3.2	Primary
Va 3	3	Third Validity estimate	3.2	Primary
Ac 1	4	First Accuracy estimate	3.2	Primary
Ac 2	5	Second Accuracy estimate	3.2	Primary
V 5	6	Fifth Volume estimate	2	Primary
Ac 3	6	Third Accuracy estimate	3.2	Primary
Ac 4	6	Fourth Accuracy estimate	3.2	Primary

27 Total; 13 Primary

Table 2

Data Elements for Test 2 Data

Variable Name	Task #	English	Field Width	Importance
SS #	--	Social Security #	9	--
Test Code	--	Test Code	3	--
E	1	# of ends statements	1	Secondary
M	1	# of means statements	1	Secondary
J	1	# of justification statement	1	Secondary
V 1	1	First Volume estimate	2	Primary
Va 1	1	First Validity estimate	3.2	Primary
Va 2	1	Second Validity estimate	3.2	Primary
Va 3	1	Third Validity estimate	3.2	Primary
Ac 1	2	First Accuracy estimate	3.2	Primary
Ac 2	3	Second Accuracy estimate	3.2	Primary
Ac 3	4	Third Accuracy estimate	3	Primary
V 2	5	Second Volume estimate	2	Primary
V 3	5	Third Volume estimate	3.2	Primary
Va 4	5	Fourth Validity estimate	3.2	Primary
V 4	6	Fourth Volume estimate	3.2	Primary
Va 5	6	Fifth Validity estimate	3.2	Primary

15 Total; 12 Primary

Manifest Ability Scale

The traditional approaches to ability measurement locates the individual upon an ability scale that is a mathematical function of the raw score scale. Whether the statistical procedures are sample bound, as is the case with the classical models of ability scaling, or whether the procedures are sample invariant, as is the case with latent trait models of ability, the mathematical functions involved are designed to provide an ability metric that is relatively stable across variations in test score distributions.

There is nothing intrinstically wrong with these approaches. However, by beginning with a different set of axioms (or assumptions), it is possible to develop a stable and lawful scale of ability that is simpler in conception and calculation. To begin with, all ability measurement assumes that ability is distributed across individuals. That is, as a natural pheonomena, there exist individual differences in given abilities. The ability scale developed, by whatever approach, is expected to make such discriminations between individuals in a consistent and true fashion. If the scale provides for sufficient discriminations and proves consistent, scores obtained upon it are typically treated as interval data, although this is an assumed property in most cases. The manifest ability scaling model that will be introduced in the following also begins with this fundamental assumption, that the ability is distributed among the natural population, but it differs in its conception of ability in a fundamentally different way.

In the usual approaches the ability is something attributable to the individual, underlying their behavior, so to speak. The degree for which the ability is attributable must be deduced from objective properties of individual response patterns to select test stimuli, e.g. items or tasks. But scoring zero in response to the test stimuli does not imply a zero degree of attribution.

Since the individual is alive and functioning, they are presumed to possess the ability, in some degree, even though this is unknown.

For notions like intelligence and aptitude, this is probably a correct assumption. There are, however, many abilities which one can plainly have or have not, in addition to having in some degree. For instance, one can or cannot fly a plane. No amount of fumbling in the cockpit is going to count as having the ability to some low, unknown degree. To show that one has the ability to any degree, one has to demonstrate it. No demonstration of even the rudiments of the ability equal zero ability. This difference between approaches may be referred to as the difference between the principle of inference, which the classical and latent trait approaches employ, and the principles of demonstration, which is employed in nominal applied performance testing and the scaling of manifest ability on a continuous metric. This scale need not derive from some mathematical relationship between the response pattern and another quantitative construct, rather from the response pattern alone, the standardization of raw scores sufficiently discriminates among individual differences. Statistically, manifest ability scales are linear transformations of the standard z-scores of any large, representative sample of a given population. The large, representative statistical sample is the basis for stability over given populations over time for all approaches to ability scaling. The sample essentially maps out the gradients of the scale upon new individuals and may be located without the individual raw score being added to the sample and reanalyzed in total. This is the case in using percentile tables.

Because an individual may show no manifest ability, the zero point has a plausible interpretation. Hence the standard scale can be anchored to the zero point and interpretations of magnitude can be made. A raw score of zero on a sample will have the z-value of $-\frac{\bar{X}}{S.D.}$. No one can score lower than this point. The linear transformation of the z-metric is anchored to zero by using the absolute value of $-\frac{\bar{X}}{S.D.}$ as the added constant in the transformation equation, multiplied by the scaling factor applied to the z-values. For instance, if the scaling factor equaled 100 and absolute zero point z-value equals z_0, the transformation equation would be:

$$\text{Transformed Score} = 100\,(z_0) + 100\,(z_i)$$

The approach was carried out in this study by the following procedures, applied to separately to the raw data of each test.

1. All individual scoring records for the test were pooled, pretest, posttest and the two reference groups.
2. Each variable recorded for the test was standardized and anchored to zero over the entire sample.
3. The transformed and anchored values were written to new data files for each individual.

The Strength Model

Each assessment task represents a topographical class of behaviors, that is, the performances of several individuals on the task will bear resemblances in form, or , the performances of one individual to the task and other tasks having formal resemblances, will also resemble one another in form.

Since the population involved is expected to have the capability to respond to the task, their individual differences are in the strength of which they have learned the class of behaviors required by the task.

Strength is defined as a function of both quantitative and qualitative aspects of the behavior performed, e.g. how much and how well. The problem is how to derive statistics for these aspects which cross over the boundaries of each task.

The specific task performance called for by the assessment are first order classes. The general properties that exhibit and share in common with the other tasks are second order classes. The strength model separates these second order classes into those properties and their estimates which measure accuracy, correctness, or validness. Strength value, S, is given by:

$S_i = [(V|f(v_{\frac{1}{2}}, v_2, \ldots) (Q|f(q_1, q_2, \ldots))]^{\frac{1}{2}}$

$a - ((V)(Q))^{\frac{1}{2}}$

Where V = the volume or quantitative value

Q = the qualitative value

$f(v_{\frac{1}{2}}, v_2, \ldots)$ = the computational function producing V from a set of primary variables, $(v_1, v_2, \ldots)$.

$f(q_1, q_2, \ldots)$ = the computational function producing Q from a set of primary variables, $(q_1, q_2, \ldots)$.

For Test 1, the computational functions V and Q are:

$$V = \frac{v1 + ve + v2 + v3 + v4 + v5}{6}$$

$$Q = \frac{va1 + va2 + va3 + Ac1 + Ac2 + Ac3 + Ac4}{7}$$

For Test 2, the computational functions of V and Q are:

$$V = \frac{v1 + v2 + v3 + v4}{4}$$

$$Q = \frac{va1 + va2 + va3 + Ac1 + Ac2 + Ac3 + va4 + va5}{8}$$

Some advantages of the strength model are that:

i. It discriminates between individuals performing at the same level of quantity or the same level of quality and compensates for reckless increases in quantity by being sensitive to losses in quality.

ii. It is philosophically compatible with manifest ability scaling.

iii. It yields three simple values, quantity, quality, and their product, which can be interpreted in common sense analogues by most reasonable and sentient persons.

iv. It can be used with non-parallel test provided tests themselves pass a consistency test.

v. Item by item, or task by task, scores are also available and can be used in closer examination of the overall findings.

The Consistency Test of Non-Parallel Forms

If a sufficiently large population is randomly divided in two, one would expect that the spread and central tendency of manifest ability would be the same for each part. This hypothesis can be tested with t-tests statistics on V, Q, and S for each test or by multivariate test statistics on the vectors (v1, v2, . . .) and (q1, q2, . . .) for each test. If there is no significance differences, then the two tests are consistent and the second order measures from each may be pooled in making between group comparisons.

Internal Consistency

If vectors (v1, v2, . . .) and q1, q2, . . .) measure the same class of properties in the same directions, the members of each vector should have high inter-correlation. It would also be reasonable to expect the vectors to have high coefficient alphas, the internal consistency index appropriate to multi-valued data.

Refining the Test

Because of timeline required by this study, the usual thorough refinement of the test was not possible. The data sufficient for making the needed empirical evaluation was the data that the measures were to produce for the research design. But given a large data base a number of very powerful statistical techniques can be used to sharpen the test.

1. Multiple regression analyses can be used on the vectors (v1, v2, . . .) and (q1, q2, . . .) with V and Q as the criterions respectively. The best contributing subsets of v's and q's can be identified and non-contributing or excess v's and q's can be set aside for re-examination.
2. A general factor analysis can also be performed on the vectors. The results of the general factor loadings can be used to identify non-contributing members of the vectors. The general factor loadings can also be stabilized on a large population sample and used in new computational functions for deriving V and Q. For instance, the badings could be used as scoring weights or V and Q could be averaged over factor scores for each vi and qi.

With the creation of additional assessment tasks as many as four or five general non-parallel test forms could be established with some interchangeability of tasks between tests which would be well suited for time series studies of competency attainment where the content between time periods is not parallel.

Appendix C

Professional Competencies Battery

PROFESSIONAL COMPETENCIES BATTERY

Test (1)

Developed January, 1978, for the U.S.O.E. research development project entitled: The Development and Evaluation of a Supervised Occupational Experience Program for Vocational Education.

General Instructions to the Students

* This test presents a series of problems that require the exercise of skills that ground one's professional competence as a vocation education teacher. The information upon which the problems are based is provided.

* The test is demanding and will require considerable concentration. The responses you will write out will be scored for accuracy and completeness as well as sheer volume. No one, not even experts, are expected to score perfectly on all items given the time constraints. Perform as best and as surely as you can.

* Some of the problems are more difficult than others, or require a more involved answer. The number of minutes allotted for answering each problem, as an average, is given with each problem. You may take more or less time as you like. The number is to help you gauge your time and pace and gives you an idea of how long it will probably take you to answer the problem fully.

* You have 55 minutes overall.

* Specific instructions for each problem are presented as needed.

SET I - 3 problems Total Time - 30 minutes

The three passages that follow present information on the occupation of sales or selling. The first passage is detailed from the Dictionary of Occupational Titles, Third Edition; the second is a job description for a salesperson from a retail store; and the third is observation data of a salesperson. This information is sufficient for rendering a thorough occupational analysis using Duty statements, Task statements, and Task analysis (These will be defined later for your use).

Passage 1

290. Sales Clerk (Sales Clerking)

Receives payment for merchandise, usually in a retail store, such as for bakery goods, magazines, groceries, gifts, books, tobacco and other various items selected by the customers. Wraps or bags merchandise. Keeps shelves stocked with merchandise. May keep record of sales, prepare inventory of stock, or order merchandise.

Seldom specializing in any single commodity or group of commodities, and not requiring much more knowledge of merchandise than price. Requires the ability to relate to people at all levels; powers of persuasion, verbal facility and numerical ability in certain instances; and initiative and drive.

Passage 2

Job Description - Salesperson, general merchandise

Responsibilities

1. Know merchandise on display
2. Know store rules and policy
3. Know rudiments of sales techniques
4. Make contact with customers entering floor area of responsibility in a cordial, polite manner
    a. Listen to customer's expressed desires and needs
    b. Display and comment upon merchandise of interest
    c. Answer questions by customer concerning merchandise
5. Perform sales transaction quickly and accurately, operating a computerized cash register.
6. Maintain merchandise on display, arranging and cleaning where necessary.
7. Perform stock inventories and initiate purchase orders for depleted items when authorized to do so.
8. Maintain unobtrusive observation of customers declining assistance for the purpose of preventing merchandise losses due to theft.

Passage 3

Observation Record - Sales Clerk X

X punches in time card on time clock and reports to gifts department on the merchandise floor. There are no customers, so X checks cash register terminal and walks floor area, positioning and dusting merchandise on display.

X spends next three hours waiting on customers, making initial contact with each as they enter the gift department floor area. Where assistance is requested, X comments on different types of gifts and points out various items which seem to meet the customer's expressed desires. X sometimes actively waits on two or three customers at a time, returning to each as soon after the customer signals for help. X operates the terminal for each transaction quickly, entering both the stock number and the item's price. Special forms are filled out for credit customers.

After lunch, Y covers floor while X helps place newly arrived merchandise in the proper storage area of the stock room and puts the display items of merchandise out on the floor area. X makes entry on the stock inventory form for the newly arrived merchandise.

From two o'clock until closing at five, X waits on customers. At five o'clock, X closes the cash register terminal, counting and packaging the cash on hand and instructing the terminal to close out and summarize the day's transactions.

X punches out and goes home.

Problem 1 Time - 15 minutes

From the information given in the passages, develop and write out an occupational analysis of sales clerking on the following pages. You may make outlines and notes as preparation but you must achieve a logical format. Do not write out the analysis in prose paragraphs. The analysis must employ duty statements, task statements, and task analyses in its rendering. Definitions of these are provided for your information.

> Duty - an arbitrary division of a job into related tasks for descriptive purposes. Duties are usually stated as a general area of responsibility, with action words ending in "ing," gerunds. (Example - altering men's clothing.)
>
> Task - a meaningful unit of work activity generally performed on the job by one worker within a limited period of time, that is logical and necessary to achieving a single objective or output. (Example - taper trouser legs.)
>
> Task Analysis - a breakdown of a task into the actions, operations, or activities which are logical segments of the task that when completed, advance the completion of the task - in sequence where necessary. (Example - unravel seams, cut material, resew seams, replace cuffs.) Be as comprehensive as time allows. Be sure to capture the essential aspects of selling.

Problem 2 Time - 5 minutes

From the information given in the passages and from your occupational analysis, write three complete performance objectives for a student training to be a salesperson. Attempt to select three of the most important of the many possible objectives.

Problem 3 Time - 10 minutes

Assume that you have students receiving on the job training as salespersons at training stations in retail stores. As the students' teacher, you must evaluate their on-the-job performance. You will need to evaluate their progress in acquiring occupational skills, their work attitudes and habits, and their personal traits and characteristics. On the following pages, list the specific types of information you would collect for the evaluation, the methods by which you would collect it, and the manner in which you would score, rank, or grade the student, once this information was obtained. Your answers will each have three parts, that is, when you specify a type of information, you should also specify the method and the scoring for that type of information. Be sure that your statements of method and scoring are not ambiguous.

SET II

Time - 5 minutes

Call to mind the concept of on-the-job instruction and all the possible activities that you, as a teacher, must perform to set up and maintain a program of on-the-job instruction for your students. Mark, by placing an "X" in the space provided to the left, those statements of activities in the following list that are clearly activities that are part of setting up and maintaining on-the-job instruction of training stations in the business community.

______Plan training activities.

______Locate and secure training stations.

______Develop long-range program goals.

______Match the students' career goals with training opportunities.

______Determine the employment needs of the business community.

______Evaluate students' progress

______Evaluate adequacy of training station.

______Coordination visits.

______Inform the community of the operations of the total cooperative program.

______Assess safety, health and legal requirements of training station.

______Evaluate the sponsor's management practices.

______Involve training sponsor in the solution of any problem arising.

______Train on-the-job instructor.

______Inform students of any required dress codes, timekeeping procedures and benefits.

______Advise training sponsor of students' academic achievements.

______Place students in jobs after training.

______Write training agreements.

49/100

Set III

Time - 10 minutes

In column A are student career objectives. In column B are available training opportunities in a cooperative education program. Place the number or numbers of the training opportunities in the blank to the left of the career objective with which it is consistent. Some career objectives have more than one training opportunity represented in Column B. Some training opportunities have no relationship with the career objectives in Column A.

Column A
Career Objectives

__________ Agricultural Mechanics and Farm Business

__________ Electronics

__________ Advertising Services

__________ Insurance

__________ Cook/Chef

__________ Administrative Assistant

__________ Personnel

__________ Transportation

__________ Finance

__________ Food Management, Production and Services

__________ Hotel and Lodging

Column B
Training Opportunities

1. Sample Distributor
2. Poultryperson
3. Baggageperson
4. Safe Deposit Clerk
5. Veterinary Laboratory Assistant
6. Dietician Assistant
7. Printing Press Operator
8. Tube Tester
9. Receiving Room Clerk
10. Social Security Clerk
11. Court Reporter
12. Telephone Operator
13. Desk Clerk
14. Weed Inspector
15. First Aid Attendant
16. Caterer
17. Benefits and Service Records Clerk
18. Seamstress
19. Bank Teller
20. Budget Technician
21. Well Drilling Operator
22. Short-order Cook
23. Ticket Agent
24. Payroll Clerk
25. Sign Writer

Set IV Time - 10 minutes

Below is a sample training agreement form that is defective or incomplete on a number of counts. Read over it carefully and list all the errors of omission that you detect. Number each error you list consecutively. Some of the omissions are critical; some would be optional, depending on how comprehensive one intended the agreement to be. Listing both sorts of errors is valid, but be sure to list all the critical omissions of essential information.

Sample Training Agreement

Student's Name ______________________ Birthdate ______________ Age ______

School ______________________________________ Telephone __________________

Training Station __________________________ Telephone __________________

Address at Training Station __________________ Telephone __________________

Dates of Training Period: from ___________ to ___________

Responsibilities

The student agrees to:

1. To be regular in attendance.
2. To show honesty, punctuality, courtesy, a cooperative attitude, proper health and grooming habits, appropriate dress and a willingness to learn.
3. Conform to the rules and regulations of the training station.
4. Report to the teacher-coordinator all information necessary to the training program.
5. Contact the teacher-coordinator before resigning.

The training station agrees to:

1. To provide a variety of work experiences for the student-learner that will contribute to the attainment of their career objective.
2. To adhere to all Federal and State regulations regarding child labor laws, and other applicable regulations.
3. Assist the teacher-coordinator in making an honest appraisal of the student's performance and progress.
4. To provide time for consultation with the teacher-coordinator concerning the student and discuss with the teacher-coordinator any difficulties the student may be having.

The teacher-coordinator agrees to:

1. To see that the necessary classroom instruction is provided.
2. Visit the student on the job at intervals for the purpose of supervising him.
3. To assist in the evaluation of the student.

By: Date: ______________________________

____
(Employer)

____
(Student)

____
(Job Supervisor)

____
(Teacher-Coordinator)

PROFESSIONAL COMPETENCIES BATTERY

Test (2)

Developed January, 1978, for the U.S.O.E. research development project entitled: The Development and Evaluation of a Supervised Occupational Experience Program for Vocational Education.

General Instructions to the Students

*This test presents a series of problems that require the exercise of skills that ground one's professional competence as a vocation education teacher. The information upon which the problems are based is provided.

*The test is demanding and will require considerable concentration. The responses you will write out will be scored for accuracy and completeness as well as sheer volume. No one, not even experts, are expected to score perfectly on all items given the time constraints. Perform as best and as surely as you can.

*Some of the problems are more difficult than others, or require a more involved answer. The number of minutes allotted for answering each problem, as an average, is given with each problem. You may take more or less time as you like. The number is to help you gauge your time and pace and gives you an idea of how long it will probably take you to answer the problem fully.

*You have 55 minutes overall.

*Specific instructions for each problem are presented as needed.

Set I - 3 Problems Total Time - 30 minutes

The following is a set of facts about a given school and community. Read these over carefully as you will be asked to develop a set of goals and objectives for a high school vocational education program that specifically takes these facts into consideration.

I. Economic Picture

	Occupational Group	Current % of Work Force	Expected % of Expansion of Work Force in three years	% of Students Receiving Training in Group
1.	Professional, Technical and Managerial	8%	50%	5%
2.	Clerical and Sales	22%	25%	50%
3.	Service	18%	25%	10%
4.	Farming and Forestry	12%	-10%	20%
5.	Processing	11%	0%	5%
6.	Machines Trades	10%	-10%	5%
7.	Construction	9%	20%	5%

II. School Picture

Percent of Student body attending college next year	56%
Percent of Students attending college next year in College Prep. Study	65%
Percent of Students finishing College	26%
High School Dropout Rate	10%
Projected Enrollment in five years as percentage rate of current year	-20%
High School Graduates living in community three years after graduation	60%

III. Cooperative Education Program

Occupational Area	Number of Training Stations
Retail Trade	18
Service Trades	4
Industry	5
Agriculture, Production and Agri-business	8
Government	2
Professional Support	2

Problem 1 Time - 15 minutes

Given these facts and all you can deduce from them, develop a limited set of five program goals or objectives for the vocational program for the near and intermediate future. Under each objective, state at least one action or activity that should be performed to meet the intent of the objective, including one sentence explaining how the activity serves the objective.

Problem 2 Time - 5 minutes

List three specific entry level jobs available to high school students within the occupational areas listed below.

Retail Trade

Service Trades

Agriculture, Production and Agri-business

Government

Problem 3 Time - 10 minutes

The following three problems can be solved given information provided on the three tables of data presented earlier. Make the computations necessary to answer the problem. Write out the figures you use and the computations you make in addition to putting the answer in the blank provided.

1. How many students attending college next year will probably not finish college?

2. If the total work force is expected to be 13,483 in three years, how many will be involved in professional, managerial, and technical occupations?

3. Given the total work force projection cited above and a projected population of vocational education students of 386, what percentage of needed work force expansion in the service area is likely to be filled by the vocational education program, given the current level of student involvement?

Set II

The following items- are statements of steps in a method for quickly and efficiently deriving the competencies or tasks that must be performed by persons employed in a given position or occupational area. The steps are randomly ordered. Indicate their logical sequence by placing the number "1" to the left of the step that would come first, the number "2" to the left of the step that would come second, and so on to step 8.

Items

_____a. Review and refinement of skill statements.

_____b. Structuring of a complete competency profile chart.

_____c. General introduction and orientation.

_____d. Sequencing the skill statements.

_____e. Identification of the general areas of competence.

_____f. Review of a description of the specific job or occupational title.

_____g. Identification of the specific skills for each of the general areas of competence.

_____h. Establishing levels of competence for each skill in terms of difficulty, frequency and general importance.

Set III Total Time - 20 minutes

The first passage that follows describes a problem arising at an on-the-job instruction site. The second passage details some established policy governing the cooperative education component of a vocational education program. Read both passages carefully, as you will need the information from both in order to respond adequately to the series of problems that follow the passages.

Passage 1

By agreement, an established retail firm offers several training stations for on-the-job instruction in bookkeeping and other clerical work in accounting. The owner of the firm negotiated and signed the agreement and is wholly supportive of the program's goals. The firm's head of accounting has been an employee of the firm for 20 years and is the firm's supervisor for the training stations.

About half the students working at the training stations have career objectives that aspire to higher level accounting or private business. The other half do not indicate such aspirations and are primarily interested in having employable skills and the ability to keep a job. The training agreement specifies the opportunity to learn everything about accounting that the Dictionary of Occupational Titles specifies short of work requiring a college degree.

Several students have complained to you as the vocational education coordinator of the program that all they were learning and performing were the bare essentials of the job. Some were discouraged and quit the program. Others became indifferent to the occupational experience because it was failing to stimulate them. From interviews with the students and the head of accounting, it is clear that the supervisor possesses the knowledge of the higher order skills and responsibilities of accounting but does not involve even the permanent staff in these matters. The few occasions where such instruction was attempted because of the students' persistance were made so unpleasant to the students that the instruction was soon dropped. The supervisor was in charge of such instruction.

One student has now actually had verbally abusive exchanges with the supervisor on precisely this question of more involving learning. The supervisor feels now as if he has taken quite enough of the challenges to his authority by students-in-training and is determined to persuade the owner to drop the whole program as a bother and general obstacle to the efficient conduct of business.

Passage 2

Policy Extracts for a Cooperative Education Program

The cooperative education is expected to help students:

i. to gain actual work experience that will help them make occupational choices, understand the responsibilities of employment and the world of work.

ii. to develop and improve the skills necessary to securing employment and advance in their chosen occupational area.

iii. to develop the cooperative skills required when working with others.

iv. to make an easier adjustment from the role of a student to the role of an employee.

Businesses involved can be expected to benefit by:

i. helping secure and maintain the training standards for the jobs for which they employ workers.

ii. training potential full-time employees in their own business.

iii. obtaining better qualified part-time employees who are receptive to instruction, motivated and interested.

iv. getting training assistance.

v. rendering an important public service.

Problem #1 Time - 10 minutes

Write out the steps in the order that you would follow in attempting to solve this problem. With each step, explain what you expect to accomplish. You desire to keep the business firm in the program, but you also are committed to insuring that your students get the opportunities they need and expect. Number the steps.

Problem #2 Time - 10 minutes

Describe fully two possible solutions to the problem that both improve upon the student's prospects and keep the retail store in question in the program. Develop the solutions using paragraphs. Be sure to detail any changes in the sponsor-school relationship, explaining the advantage of each and why the changes solve the problem within the goals of the policy. Your answers will be judged by their completeness and exactness. Innovative solutions must also meet these criteria.

Appendix D

Scoring Booklets

Scoring Booklet

Test (1)

Test Code Number

____

Scorer______________________

Scoring Instructions - Item 1.1 Occupational Analysis

I. Organization -

The occupational analysis will be composed of duty statements, task statements, and element statements. (See definitions in the test's instructions for item 1). The structure of their logical relationship can be captured in standard outline format. There are three preceeding levels of organization that can be observed in the student's response. Let D, T, and E stand for duty, task, and element statements in the following illustrations:

Level 1

	T
	D
Unorganized list	T
	E
	D
	D

Level 2

D	E
D	E
D	E
	E
T	E
T	E
T	E
T	
T	

Level 3

Partially integrated into outline form

D
D
T
D
T
T
T
E

Level 4

Fully integrated into outline form

D
T
E

D
T
E

On the student's answer, mark each duty statement with a D, each task statement with a E and each element statement write an E. Observe the pattern of D's, T's, and E's and determine which level of organization is manifested by the student's written response. Score the level in the space provided below.

Level of Organization____________________

II. Logical Volume

A. Each statement of duty, task, or element introduces a logical quantity into the composition. Their sum constitutes the finite limit of logical content.

$$\text{Volume, } V = D + T + E$$

Count the number of duty statements, D, and enter that number in the space provided below. Do the same with task statements, T, and element statements, E.

D_____ T_____ E_____

Compute volume by adding D, T, and E together

V______________

B. Compute the expansion and density indices that follow by using the formulas that are given.

1. Expansion, $V_{exp} = \frac{(D)(T)(E)}{V}$

   V_{exp} = __________

2. 1st order density = $\frac{T}{D+T}$

   V'_{den} = __________

3. 2nd order density = $\frac{E}{T+E}$

   V''_{den} = ____________

III. Correctness

Some of the D, T, or E statement may be redundant or identical to each other. Some may be represented as a task statement yet be really a duty statement. The student may misclassify a number of the statements (they will frequently provide their own labels). Or the alleged statement may simply be wrong.

Go back through the statements that you marked with a D, T, E and strike a slash through those which are repetitions, misclassified, or wrong. Although the use of the gerund in stating debits is preferable, do not count it against the correctness of the statement.

Count the number of slashed D's and enter that number below. Do the same with the slashed T's and E's.

D_____ T_____ E_____

Please check here if student supplied labels or obviously classified D, T, and E students by outline form.

____

Compute:

1. Overall validity $= 1 - \left(\frac{\cancel{D} + \cancel{T} + \cancel{E}}{V} \right)$

2. D - validity $= 1 - \frac{\cancel{D}}{D}$

3. T - validity $= 1 - \frac{\cancel{T}}{T}$

4. E - validity $= 1 - \frac{\cancel{E}}{E}$

Scoring Instructions - Item 1.2 Performance Objectives

A. There should be three clearly separate objectives written as to response. Each objective statement should contain three elements.

1. The performance
2. The sufficient conditions under which it is to occur
3. The criteria or standard of performance

Examine each objective for these three elements, counting 1 if the element is present and 0 if it is not. Enter this sum below on the blank labeled "Form."

Form______________

B. Correctness

Examine each objective and determine if, in fact, it is appropriate to the occupational data. If an element of the objective, or the whole objective, does not fit the data, strike a slash through the offending phrase. A totally wrong objective will have at most three slashes, one for each element. Extraneous material is undesirable but is not to be counted against the student if all three elements are explicit and correct. If only two elements are explicit and correct, extraneous content merits one slash. If only one element is explicit and correct, up to two phrases of extraneous content may be slashed.

Count the number of slashes, #S, and use that number in the following computational formula.

$$\text{Validity} = 1 - \frac{\#S}{9}$$

Validity______________

Scoring Instructions - Item 1.3 Evaluation Design

I List three part (triad) statements. The first part should be a statement (noun or phrase) of a type of information; the second part a statement about a method of information collection and the third about scoring or quantifying the obtained information. The interdependency of the three parts should be obvious graphically or by outline notation. Notice that the students could violate the instructions and organize their answers by set (level 2) or worse. If they do, note this immediately below in the space provided.

Level 2 (sets) present ________

1. Count the number of types of information statements listed and enter this number below. Do not count duplications.

Types of information ________

2. Let "types of information" be represented by "TI". The logical volume of the answer then should be three times TI, 3TI.

Count the number of explicit methods and scoring statements written out by the student, add that number to TI and enter the sum, call it S, into the following formula.

$$\text{Completeness ratio} = \frac{S}{3TI}$$

Completeness ratio ________

3. Correctness

Examine each type of information statement. Slash all duplicates. Slash all that request information that is unsubstantiated by the occupational data. Count all slashes and let "X," represent the sum.

X_1________

Examine all explicit methods and scoring statements and count the total. Let "Y" represent the sum. Slash all methods and scoring statements where the method is insufficient or inappropriate for collecting the stated type of information and where the scoring is incongruent with the method of collection. Slash all ambiguous and unintelligible statements of method and scoring. Count all these slashes and let "X_2" represent the sum.

Y__________ X_2____________

Compute:

$$\text{Validity} = \frac{X_1 + X_2}{Y + TI}$$

Validity ________

4. Perform content analysis on types of information, methods, and scoring statements (See Comments and Content Analysis Booklets).

5. Diversity of Method

Let "M" represent the number of type categories that evolved in the content analysis of methods. Compute:

$\frac{M}{TI} =$ _______

Scoring Instructions - Item 1.4 On-The-Job Instruction

Align the student's checklist to the key checklist given below. "X's" in the key represent "yes's" and the "O's" represent "no's". Slash each mismatch between the student's checklist answers and the answers given in the key. Count the number of slashes, call this "S" and compute accuracy using the formula below.

$$\text{Accuracy} = \frac{17 - S}{17}$$

Accuracy____________

Key

_X_ Plan training activities.

_X_ Locate and secure training stations.

_0_ Develop long-range program goals.

_X_ Match the students' career goals with training opportunities.

_X_ Determine the employment needs of the business community.

_X_ Evaluate students' progress.

_X_ Evaluate adequacy of training station.

_X_ Coordination visits.

_0_ Inform the community of the operations of the total cooperative program.

_X_ Assess safety, health, and legal requirements of training station.

_0_ Evaluate the sponsor's management practices.

_X_ Involve training sponsor in the solution of any problem arising.

_X_ Train on-the-job instructor.

_X_ Inform students of any required dress codes, timekeeping procedures and benefits.

_0_ Advise training sponsor of students' academic achievements.

_O_ Place students in jobs after training.

_X_ Write training agreements.

Scoring Instructions - Item 1.5 Occupational Knowledge, Recognition

Align the student's Column A list with the key Column A given below. Each number in the key is considered an entry. Slash all numbers on the student's Column A list that do not match the expected entries given in the key. Make a slash for each expected entry that is omitted in the student's answers. Count the number of slashes and divide this number by 25 and enter the result below.

Accuracy_____

Key

Column A
Career Objectives

2,5,14,21	Agricultural Mechancis and Farm Business
8	Electronics
1, 25	Advertising Services
none	Insurance
22	Cook/Chef
none	Administrative Assistant
10,17,24	Personnel
3, 23	Transportation
4,19,20	Finance
6, 16	Food Management, Production and Services
9, 13	Hotel and Lodging

Scoring Instructions - Item 1.6 Training Agreement

The student's answer should be an enumerated list of errors.

1. Count the number of error statements, L, and enter this number below.

Length, L________

2. Match students' error statements to the list of Major Errors key. When the student's list contains a statement of one of the major errors, check the blank corresponding to that major error as provided in the key.

Key

Major Errors - Omissions

________ Student's career objective

________ Average number of hours per week the student will be employed

________ Student's address and telephone number

________ Rate of pay

________ Training, or on-the-job supervisor's name other than signature

________ Parent responsibilities

________ Parent signature space

________ Student's social security number

3. Count the number of checks in the key representing matches between the student's list and the key. Call this number, M.

Compute:

a. Match to key ratio = $\frac{M}{8}$

Match ratio ___________

b. Major Error Proportion = $\frac{M}{L}$

Major Error Proportion _________

Scoring Booklet

Test (2)

Test Code Number

____

Scorer______________________

Scoring Instructions - Item 2.1 Data Based Goals and Objectives

1. The student's answer should consist of five parts, clearly divided in in the student's written response. Each part should begin with a statement of an end of actions, either as a goal or objective, depending on how general or specific the statement of ends is. The part should also include a statement of an activity expected to contribute to the accomplishment of the desired end and one sentence justifying or explaining either the value of the end itself or the reason why the activity can be expected to contribute to reaching the end. Each statement of ends, activities or justification is one unit of logical volume.

Read the students' written responses, marking an "E" on each statement of goal or objective, an "M" (for means) on each statement of activities, and a "J" on each statement of justification. Count the numbers of each of the kinds of lettered statements and enter the numbers below.

E _____ M _____ J _____

2. Validity

a. Ends - Examine each statement lettered "E" and determine which of the following classes it fits.

S = sound direct relationship to the data
C = construable relationship to the data
O = no apparent connection to the data

Mark the E-statement with the letter S, C, and O as you make the judgments. Count the instances of each letter and enter the numbers below.

S_____ C_____ O_____

b. Means - Examine each statement lettered "M" and determine which of the following classes it fits.

S = sound, clear contribution to the end stated in conjunction with it
C = construable contribution to the end stated in conjunction with it.
O = no apparent contribution

Mark the M-statements with the letters S, C, and O as you make the judgments. Count the instances of each letter, not including the instences already recorded for the E-statements, and enter the numbers below.

S________ C________ O________

C. Justification - Examine each justification statement lettered J and determine which of the following classes it fits.

S = justifies end or relationship of activity to end clearly and directly
C = construable justification
O = no apparent reason why statment justifies anything

Mark the J-statements with the letters S, C, and O as you make the judgments. Count the instances of each letter, not including the prior instances already recorded for E and M statements. Enter the number below.

S________ C________ O________

Scoring Instructions - Item 2.2 Occupational Knowledge, Recall

There are twelve possible entries. An entry is judged correct if both:

i. it fits into the respective job cluster
ii. it is an entry level job, i.e. something for which a high school student would be eligible.

If either of these conditions is not met, strike a slash through the entry. Consult the Vocational Education and Occupations handbook and the Dictionary of Occupational Titles for disputable cases.

Also make a slash for each ommitted entry.

Count the number of slashes and label that number W. Enter below

W________

Compute:

R = 12 - W R___________

Accuracy = $\frac{(R - W) + 12.1}{24.1}$ Accuracy_______________

Scoring Instructions - Item 2.3 Computations

The answers and derivations are given in the key below. The number of points to be scored if the answer is correct or the derivation is correct is given in parentheses in the key for each answer and derivation. If correct, write the number points in the corresponding blank. When finished, sum the numbers and label, C. Enter below blank C.

C________________ Compute: Accuracy = $\frac{C}{9}$

Accuracy ________

Key

Problem 1

Answer: 26%
(1 point) _____

Derivation: none
(no points)

Problem 2

Answer: 1,618
(2 points) ______

Derivation: 13,483
x .12
1,618
(1 point) ______

Problem 3

Answer: 6%
(3 points) ______

Derivation:
a. (13,483)(.18)(.25)= 607
b. (386)(.10) = 39
c. 39/607 = .06 = 6%

(2 points)

Scoring Instructions - Item 2.4 Skills Analysis Method

Align the student's responses with the key below. Subtract the number given in the key for the first item from the number entered by the student. Square the result. Continue this procedure for each item. The key is set up to organize the step by step results for you. Sum all the squared derivations, Ed^2, and enter below.

Key

Student's Column	Key	d	d^2
X	Y	x-y	d^2
	5 a.		
	8 b.		
	1 c.		
	6 d.		
	3 e.		
	2 f.		
	4 g.		
	7 h.		

Estimate of Disarray, Ed^2 ____________

Scoring Instructions - Item 2.5 Problem Solving Steps

1. The alleged steps should be mentioned. Count the number of steps, S, and enter below.

The Number of Steps, (S) ____________

2. Sequential structure. Examine each step. If a succeeding step is contingent upon preceding step, draw a line and arrowhead back to the preceding step from the succeeding step for which it is a necessary condition. Count the number of arrows marking such connection, call that number C and enter into the following formula. Note that some of the steps will be without necessary sequence.

C______

Compute:

$$Sf = \frac{C}{S-1}$$

Sf______________

3. Correctness or val

3. Correctness or validity. Examine each step. Judge: one, if it is coherent as a whole, e.g. its sentences are not non sequiters: two, if it relates to the problem in a constructive way, e.g. a step concerning the unambitious, satisfied students is probably unessential since they are not involved in the problem; three; if it does not assume occurence of prior steps not stated, e.g. a step that asks for a change in training supervisors without earlier, or concomittantly, gaining the owner's consent is flawed. Slash all steps containing the flaws enumarated above and count them. Call their sum N.

Compute: $\text{Validity} = 1 - \frac{N}{S}$ Validity____________

Scoring Instructions - Item 2.6 Solution Evaluation

1. There should be two discernible sections in the student's written response, one for each solution, e.g. 2 paragraphs, 2 numbered sections. If there are two, write "2" in the space below. If only one, write "1". For none, enter "0".

Proposed Solutions ____________

2. Completeness. Each section states a solution as an accomplishable fact either as a goal or end state of affairs or as an explicit description of an end state of affairs. Statements of doings, process or procedures statements, do not count as statements of end state of affairs.

Each section should also contain explanatory text on the advantages of the solutions, its relevance to the problem, or how it should work to alleviate the problem state of affairs. Use a wavy line to mark the place where the solution and the explanation separate.

If either the solution statement or the explanatory material is absent in the section, mark a slash by the section. No answer at all would result in 4 slashes. Enter the number of slashes below.

S____________

3. Validity. Examine each solution statement and determine if it has a descernible connection to the problem state of affairs. For instance, a solution which has the student take special work in

learning the D.O.T.'s contents would be irrelevant to the problem. Likewise a solution that took the improvement of owner-student communications would miss the point. The real communication problem is in the instructor-student-on site supervisor triad. Mark each weak or irrelevant solution statement with an "X".

Also examine the explanatory material. The student has the leeway to choose the kind of elaboration he wants. However, if a "new" solution statement is offered, or if the explanation is incoherent or unconnected to the solution statement, mark an "X" for each offense, sentence by sentence. Do not penalize the student if they could have said more but doesn't. Penalize only for flaws in the explicit reasoning. Count the number of "X's" and enter below.

X ______________________

Compute:

$$\text{Accuracy} = \frac{x}{4-S}$$

Accuracy ________________

Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

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INTRODUCTORY MODULE

The Center for Vocational Teacher Education
University of Nebraska-Lincoln
311 Teachers College
Lincoln, Nebraska 68588

January, 1978

MODULES

In a recent study at the University of Nebraska-Lincoln, a national sample of business and distributive education teachers, state supervisors, and teacher-educators identified the professional teaching competencies which they felt could be developed in a supervised occupational experience program. The Center for Business and Vocational Teacher Education at UN-L has selected twenty of the identified professional teaching competencies and developed a learning module for each competency.

The modules provide activities which lead to mastery of all or a part of each competency. Each module is designed to be as self-contained as possible and to require the pre-service vocational teacher to complete them using the resources of either the place of employment or the business community.

Sequence and Clusters of Directed Occupational Experience Modules

--Introductory Module

Program Planning

--Conduct an occupational analysis.	A1

Instruction

--Write student performance objectives.	B1
--Conduct individual and group field trips.	B2

Cooperative Education

--Establish criteria and guidelines for initiating a cooperative vocational education program.	C1
--Identify and secure prospective training stations.	C2
--Develop the training ability of on-the-job instructors.	C3
--Develop training agreements and training plans for placing students on the job.	C4
--Coordinate and supervise on-the-job instruction.	C5
--Evaluate students on the job.	C6

Community Relationships

--Provide service to and maintain liaison with members of the community.	D1
--Develop a plan for school-community relations.	D2

Technical Development

--Keep up-to-date in your occupational specialty.	E1

Laboratory Plan

--Plan and provide laboratory experiences for prospective teachers.	F1
--Organize and maintain the vocational laboratory.	F2
--Direct student laboratory experiences.	F3

Guidance

--Assist students in applying for employment or further education.	G1

Advisory Committee

--Organize or reorganize an occupational advisory committee.	H1
--Maintain an occupational advisory committee.	H2

Program Evaluation

--Establish criteria for student performance in a vocational education program.	I1
--Evaluate your vocational program.	I2

Each module is organized in the following way:

Title page

Introduction

Instructions

Performance Objective

Activities

Resource Section

Feedback

The introduction gives an overview of which competency is included in the module and offers a general rationale regarding why the competency is important in the field of vocational teacher education and how it relates to other areas and skills in vocational education.

The instructions define the competency more sharply and pinpoint the task that the student is expected to perform in a particular module. If the student is already competent in the target area and can fulfill the performance objective, an opportunity is provided for that student to proceed to the activities and feedback.

The performance objective states what is expected of the student in each module.

The activities prescribe the learning experiences selected to satisfy the performance objective. Directions for each task are provided along with reference to guides and samples included in the module. The student is expected to use the place of employment or the business community in the completion of each activity. This does not mean that the educational community is to be avoided but that the focus of each activity is to take advantage of the opportunities to work with and to become better acquainted with the business world.

Feedback is designed to be discussed jointly between the student and the resource person. The feedback page is organized so that each party can check the listed items when they have been satisfactorily completed. This section is not intended to be a grade sheet. The items should be considered completed if they fulfill the performance objective. Determination of the degree of completion is left to the professional judgment of the resource person. When the feedback page has been completed, it should be removed from the module and given to the resource person.

Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

Not for mass distribution

CONDUCT AN
OCCUPATIONAL ANALYSIS

Module A-1

The Center for Vocational Teacher Education
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January, 1978

146/2

INTRODUCTION

Assuming that a vocational curriculum should, in part at least, arise from the requirements of business, the activity of occupational analysis is easily justified. Studying the skills, knowledge, and attitudes required of workers is a first step in the planning of vocational education instruction. Occupational analysis is a skill required of all vocational teachers.

There are numerous occupational analysis, job analysis or task analysis formats described in the literature. They are each useful in various settings and for various purposes. The objective selected for this module from the above competency provides you with a generally useful occupational analysis format. It asks you to analyze a job in your own place of employment--either your own job or a co-worker's job. Once you have finished this module, you will be prepared to analyze any of your students' occupations. Used properly, these analyses will assure relevance and accountability in your vocational instructional program.

INSTRUCTIONS

An occupational analysis is a technique for determining what an individual in a specific occupation does. This technique includes conducting a comprehensive inventory of the tasks performed on the job. These tasks can then be analyzed in greater detail. The data from an occupational analysis provides the teacher with information that can be used in the following ways:

1. Selecting training-station sites
2. Determining course content
3. Evaluating student performance
4. Developing training plans
5. Making decisions regarding equipment purchases

This module requires you to conduct a task inventory as an initial part of an occupational analysis. If you have had experience in conducting task inventories or feel your skills in this area are adequate and can fulfill the performance objective, proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

Given an occupational analysis format, the teacher will analyze an occupation or job where he/she is employed.

ACTIVITY I

Using the form supplied in this module, conduct a task inventory for one job where you are employed.

ACTIVITY II

Compare your task inventory with the job description from personnel. If there is not a description on file, discuss your inventory with the individual who functions in the personnel role.

Consider 1) the completeness of your inventory, and 2) suggestions for improvement of the task statements.

RESOURCE SECTION

Task Inventory

Writing task statements is the first step in a task inventory. Revisions and improvements can be made once there is an initial list to work with. The following provides you with notes and examples for a task inventory.

1. The majority of inventories write task statements in a direct verb-object format with a minimum of adjectives.

Example: Occupation: Service station attendant

No.	Task
1.	Fill gas tank
2.	Wash windows
3.	Repair tires
4.	Check oil and brake fluid

Adherence to this format is dependent upon the job being analyzed. There are situations when the use of adjectives is necessary to give a complete description of the task.

2. Decide how general or specific the task statements are to be. Statements that are too general may not supply enough information concerning relevant skills to be of use in planning a vocational instructional program. Likewise, statements that are too specific become a mass of details.

3. Choose language that is clear and precise. Although there is always room for interpretation in the use of language, care in selecting the most appropriate wording to describe the task will eliminate many misunderstandings.

4. Task statements should contain a single unit of activity which is usually expressed by one verb.

Example: Use: Type credit forms

File credit forms

Don't use: Type and file credit forms

However, when a single unit of activity includes two items that are always performed together, list them as one statement.

Example: Type and correct stencils

5. An alphabetical arrangement of the initial task statements may be helpful in checking whether the statements are complete or not. With statements in such an arrangement, you can quickly scan the list to see if a task is already listed.

6. Remember to include tasks that are cyclic in nature so that the task inventory is a complete record of the job. Include the tasks which are done quarterly, yearly, or seasonly.

7. If the job being analyzed is a complex one, there may be enough task statements to warrant organizing them into categories.

8. Additional columns may be added to the inventory form to determine the importance of each task in terms of the following:

a. the time it takes to perform the task

b. the frequency of performance

c. the type of performance involved

d. the degree of difficulty involved in teaching the skill

Example: Occupation: Credit Clerk

No.	Task	Frequency of Performance	Difficulty in Learning
1.	Apply credit to contribution	daily	moderate
2.	Balance credit file	once a month	difficult
3.	Balance suspense file	once a month	moderate
4.	Calculate contributions	continuously	difficult
5.	Calculate refunds	once a week	moderate

Example: (continued) Occupation: Credit Clerk

No.	Task	Frequency of Performance	Difficulty in Learning
6.	Set up contribution credit	frequently	easy
7.	Set up suspense money	weekly	easy
8.	Type refund forms	1 or 2 times a week	easy

TASK INVENTORY

Occupation: ______________________________

No.	Task

FEEDBACK

In cooperation with your resource person determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource Person
	1. Task inventory	
______	a. Completeness of inventory	______
______	b. Clarity of statements	______
______	c. Acceptable format	______
	2. Comparison with job description	
______	a. Omissions on task inventory	______
______	b. Additional statements on inventory	______
______	c. Wording of statements	______

NAME ______________________________ UNIVERSITY ____________________________

Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

Not for mass distribution

DEVELOP VOCATIONAL EDUCATION PROGRAM GOALS AND OBJECTIVES

Module A-2

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

For reasons of accountability and program legitimacy, vocational education programs must be built upon goals and objectives. Program goals are those broad statements of purpose growing from the community survey. They state, in general terms, what the community and student clientele can expect from the vocational education program.

Program objectives are more specific statements evolving from goals. Objectives state in more specific, operational and performance-based terms what the students will be capable of doing upon exiting from the program. They are the raw materials from which curriculum is built.

Every vocational education teacher should be familiar with program goals and objectives. This module will provide you with that acquaintance.

INSTRUCTIONS

Goals and objectives development will be an essential task of any educator who is responsible for a vocational program. In this module you are asked to set up goals and objectives for a hypothetical vocational program. If you have had experience in goals and objectives writing and feel you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will develop appropriate broad vocational education program goals and attendant program objectives.

ACTIVITY I

Develop three appropriate program goals for a hypothetical vocational education program with four attendant program objectives for each goal. Utilize your current place of employment as a source for determining what needs there are in the community which a vocational program may serve.

RESOURCE SECTION

Goals and objectives have become a staple ingredient in almost every vocational program that is in existence. It would seem almost naive to suggest that a program could exist without knowing what are the expected outcomes and how they will be accomplished. Determining expected outcomes and how they will be accomplished is what goal and objective development is all about. As a vocational teacher it is very likely that you will be involved, either as a group member or as an individual, in this process of developing goals and objectives.

One common concern is what the difference is between a goal and an objective. It is not uncommon to hear an individual using the terms interchangeably without realizing there is a significant difference between the meaning of the two words. Goals are the general or broad statements concerning the "intents" of the program, while objectives are specific outcomes to be accomplished which will bring about the fulfillment of program goals. A simple analogy may help clarify the relationship between goals and objectives. First, imagine a hungry fox stalking a rabbit. Here we can identify the satisfaction of the hunger pang as the goal. This is the overall or general purpose of the fox's activities. The objective is the rabbit. First to capture, then to consume. These will in turn fulfill the goal (satisfaction of the hunger) and ultimately satisfy a need. Vocational programs in many ways are like a hungry fox--they have an identified need for which there are goals made and objectives set in order to satsify that need.

In the above situation we can identify the basic processes that are common to the development of all goals and objectives. The initial item is the identification of the need or determining where should we be focusing our energies, (hunger pangs). The second is determining the general or broad intent of our program (goal) based upon the identified need, (satisfy hunger). Finally, the identification of specific activities needed to be accomplished that will allow us to reach our goal thus satisfying a need (rabbit). We can break this down into a three-step process.

Step I - Determination of the need or needs.

Questions that need to be asked:

A. How can the needs be determined?
B. What need or needs should we be concerned with?
C. How can these needs be met?
D. What needs should be dealt with first?

Step II - Selection of Goals.

Questions that need to be asked:

A. What goals are most appropriate?
B. How do we go about meeting these goals?
C. What activities must take place in order to accomplish this goal?

Step III - Setting the Objectives.

Questions that need to be asked:

A. How will this objective aid in meeting the identified goal?
B. Are there objectives that must be accomplished prior to, simultaneous with, or after this objective?
C. What criteria will be used to determine if the objective has been achieved?
D. Under what conditions will this objective be performed?

The following is an example of a vocational goal and the related objectives:

Goal

Develop (in students) the competencies and behaviors necessary to be self-supporting and to perform as a contributing member of society.

Objectives - become cognizant of personal vocational interests and aptitudes

- development of skills and abilities needed at post-secondary training institutions

Objectives continued - development of entry level skills for those entering the job market after completing high school

- development of a positive attitude toward work
- become proficient in consumer skills
- acquire the basic skills and attitudes necessary to adapt to new jobs or tasks in the future

General Information

Goals and objectives may be found at all levels within an organization, but they all should serve the same general purpose and that is to express the "intents" of that entity and how they shall be accomplished. Within a single school district this could include goals and objectives for each of the following: the district or administrative unit, school or institution, a total education program, a service area or cluster, specific program, course or a student. One paramount criterion is that they all relate and are supportive of one another in the anticipated outcomes.

Information to make decisions about goals and objectives can be gathered from numerous sources. The following is a list of just a few:

federal vocational legislation
state educational legislation
state plan for vocational education
community surveys
manpower data
evaluative data
advisory committee
business, professional, and industrial community
state and area supervisors and administrators
faculty and guidance staff

FEEDBACK

In cooperation with your resource person, determine if you have satisfactorily fulfilled the requirements of this module by considering the following items:

Student		Resource Person
	1. Program Goals	
________	a. general intent	____________
________	b. appropriateness	____________
________	c. based upon identified need	____________
	2. Objectives	
________	a. supports program goals	____________
________	b. Specific in scope	____________
________	c. clearly stated	____________

Name____________________________________University_____________________________

A-2

Prepared by The Center for
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Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

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WRITE STUDENT PERFORMANCE OBJECTIVES

Module B-1

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

Little standardized curriculum exists in vocational education. Rather, the changing nature of society and its employment requirements and the changing career interests of students require that new vocational curriculum be developed constantly. It follows, then, that the well-prepared vocational teacher must possess curriculum development skills.

The development of performance-based objectives, while a rather simple skill, is an activity which the vocational teacher is frequently required to perform. The objective in this module asks you to demonstrate this very important curriculum development skill.

INSTRUCTIONS

This module contains materials designed to provide information and experience in the area of writing student performance objectives. Background information concerning types of objectives, writing format and criteria and sampling has been provided in the module followed by one activity which offers you the opportunity to apply this information in the business community. If you feel confident in your objective writing skills and can fulfill the performance objectives, proceed to the activities and evaluation.

PERFORMANCE OBJECTIVES

The teacher will be able to write performance-based objectives appropriate for on-the-job instruction at the teacher's place of employment.

ACTIVITY

Viewing your place of employment as a training station for a secondary cooperative education program, use the format provided in this module to write three terminal performance objectives and derive three enabling objectives from each terminal performance objective that a student could complete while employed at this site.

RESOURCE SECTION

Performance Objectives

Writing performance objectives is a very common practice in vocational education. In fact, today it is so common you may have had some experience concerning this topic, and will have an even greater probability of using or needing this information in the future.

There are many reasons why performance objectives have become so important. One way to illustrate this is to see how writing objectives is similar to planning a major journey. Few of us would travel very far without setting up some strategies about the trip. These would include what our final destination is going to be and what type of transportation we intend to use to get us there. These considerations allow us to set up some guidelines in order to anticipate how much time it will take to get to our destination, where we should be at certain points in time, and what changes might be made if things do not develop as planned. Also, because most people tend to forget the details after a period of time, we should write down the most significant parts of the plan. What is created out of all this is an instrument that the travel industry has called the "itinerary". This document helps the traveler make better and more prudent decisions before, during, and after the journey.

We can say that any learning situation is also a type of "journey". In the travels of learning we go from one point of knowledge to another. In planning this journey we need to know our destination, how we are going to get there, when we expect to arrive, and to be flexible if any changes should be needed along the way. To accumulate all of this information takes some preparation, a process we call "writing performance objectives". Similar to the travel plans, we first need to decide where we want to end up. This is the determination of the Terminal Objective. The second step is to decide what intermediate abilities are needed in order to reach this terminal objective. These intermediate abilities are called the Enabling Objectives. Therefore, in organizing a plan we must work with two levels of performance objectives. They are:

1. Terminal Performance Objectives (TPO); the final performance the learner must exhibit.

2. Enabling Objectives (EO); the activities which the learner must master before he/she can perform the terminal performance objective.

The following is an example of a complete set of performance objectives used in a cooperative vocational program:

Terminal Performance Objective: Each student-trainee at a motel/hotel training station will complete 20 room reservation transactions within a one-hour period using the training station's reservation materials and equipment. The transactions shall be evaluated by the training-sponsor for the accuracy of information, appearance of work and procedures used. A minimum number of 18 acceptable reservations will be completed.

Enabling Objectives:

1. Each student-trainee at a motel/hotel will be able to identify the conditions under which each type of reservation form is used.

2. Each student-trainee at a motel/hotel training station will be able to accurately fillall completed reservation forms.

3. Each student-trainee at a motel/hotel training station will be able to demonstrate the proper billing procedures with 100% accuracy.

4. Each student-trainee at a motel/hotel training station will be able to outline all the training station's policies concerning reservation discounts.

To insure that our performance and enabling objectives cover all the information we need, they should answer the following four questions. (A) Who is to be doing the learning? (audience) (B) What observable action will the learner exhibit? (behavior) (C) What resources will be used? (conditions) (D) How well is the objective to be mastered? (degree) This leads us very cleverly into the A B C D's of writing objectives. On the left, below, is a description of a guide which may be used when writing the objective; on the right, are the criteria which should be contained in each statement.

Format	Criteria
A is for Audience which is to perform the objective.	Who is to be doing the Learning? What is the entry level of the students expected to perform the objectives?
B is for the expected Behavior	What observable action will the learner do?
C is for the Conditions under which the Audience will perform when assessed.	What resources will be used? What time limitations will be placed on the student's performance when he/she is being evaluated to determine if he/she has achieved the objective?
D is for Degree of measurement used to determine an acceptable performance level.	Has the student mastered the objective satisfactorily? (20 out of 20, 19 out of 20, 4 out of 5, 70% for a minimum grade of C).

In our earlier example of a terminal performance objective for a learning situation we find:

Audience	is	Student-trainee
Behavior	is	Completing 20 room reservation transactions.
Conditions	are	Motel/Hotel training station using the establishment's reservation materials and equipment, within one hour.
Degree	is	Evaluated by the training sponsor according to the training's determination of accuracy, appearance and procedures used, with a minimum number of 18 acceptable reservations.

Objectives can be written in many areas, including general program objectives, course objectives, unit objectives or lesson objectives. Regardless of the area, the same general format can be used.

Additional Resource

Mager, Robert F. Preparing Instructional Objectives. Palo Alto, California: Fearnon Publishers, 1962.

FEEDBACK

In cooperation with your resource person, determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student	Performance Competency	Resource Person
______	A. Clarity of objectives	______
______	B. Completeness of objectives	______
______	C. Acceptable format	______
______	D. Appropriateness of objective	______

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Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

Not for mass distribution

CONDUCT INDIVIDUAL
AND
GROUP FIELD TRIPS

Module B-2

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

A vocational educator must use a wide variety of instructional techniques in the development of competence in students. Many of these techniques require some direct contact with the employment community. One technique that is especially useful in this regard is the field trip.

Through a field trip experience vocational students can see and experience, first hand, the realities of numerous aspects of being employed. Students are able to involve multiple senses and are apt to remember and be able to apply what they learn on a well-planned field trip.

A carefully planned field trip, growing from curricular objectives, will have enduring results. Part of that process must involve advance planning with the persons in charge at the site of the trip. This module requires you to involve a business person in the planning of the field trip.

INSTRUCTIONS

The field trip is one of many possible instructional techniques that can be used to achieve an objective, and its success depends greatly on the preparation involved. The field trip can be roughly divided into three phases: the pre-trip planning, the field trip and the follow-up activities. This module will cover the pre-trip planning. If you have had experience in planning group field trips or feel that your skills in this area are adequate and can fulfill the performance objective, proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

In co-operation with a member from the business community, the teacher will plan a schedule of events, based on a learning objective, for a group field trip to a business in the community.

ACTIVITY I

Write a performance objective for your class that can best be achieved by means of field trip, and select a business site in your community appropriate for the objective.

ACTIVITY II

In co-operation with a member of the business community, plan a schedule of events for a one-hour group field trip to the site selected in Activity I.

RESOURCE SECTION

Field Trips

Field trips are an exciting activity for students and teachers. They provide the opportunity to interact with the community and to view processes, jobs and activities first-hand. Field trips help to bridge the gap between education and society and often supply a sense of relevance to the activities in schools. The excitement and potential of field trips can be enhanced by some advance preparation.

As with all educational endeavors, the field trip should serve a purpose. It is one means of achieving an end, and if it is not the best way to do so, considering time and resources, other means should be explored. If the purpose of a field trip can be achieved as well by watching a film or videotape, it might be wise to consider that alternative rather than transporting a group to another location to achieve the same results. However, as a teacher, you should not be discouraged from planning field trips if they present the best opportunity to achieve a class objective or series of objectives.

The necessity for careful planning cannot be overstated. Not only is the time of your class involved, but a field trip involves the time and resources of both the school district and the business yourclass will visit. The support of each of these groups, as well as that of the student's parents, is necessary for success and for the opportunity to take additional field trips.

Once a decision has been reached that the field trip is appropriate and can achieve an objective or series of objectives, a site must be selected. As the teacher, you must be familiar with the business community so that you can identify possible sites. Distance does not necessarily make a field trip better. Businesses close to home may offer the same opportunities as those in another city.

After the site has been selected and before any contact has been made with the business, you need to plan what you want. When you do contact a business person to arrange for a field trip, he/she will want information regarding the purpose of the trip, the number of students involved, and the amount of time you wish to spend. Most business people are willing to help, but their time is valuable and consideration should be given to using it wisely. If you can clearly define what you want, you have a better chance of achieving it. The following items should be considered before you contact a business person.

1. The purpose of the field trip
2. The areas, processes or activities of particular interest
3. The amount of time to be spent at the business
4. The number of students in the group
5. General background on the type of group and their preparation
6. Supervision of group

Contact with a business manager can be made either by a letter or a telephone call. The initial contact should clearly explain the purpose of the field trip and request the manager's assistance. If the project is agreeable to both sides, an appointment should be made to plan in detail.

The detailed planning should cover every possible aspect of the field trip. The following items may need to be considered: approvals from the school and parents, transportation, food and lodging, background information for the students regarding the business to be visited, instructions, sequence of events of the trip, follow-up activities for the students, methods of showing appreciation to the business, and reports for the administration. If plans have been made far in advance of a field trip, it is wise to reconfirm the arrangements with the business manager just prior to the trip.

FEEDBACK

In co-operation with your resource person determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource person
	1. Objective	
______	a. clearly stated	______
______	b. appropriately achieved by a field trip	______
	2. Site selection	
______	a. appropriate to objective	______
______	b. appointment made with manager	______
	3. Sequence of events	
______	a. developed in co-operation with business manager	______
______	b. includes role of business person, teacher and students	______
______	c. can be realistically achieved in one hour	______

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Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

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ESTABLISH CRITERIA AND GUIDELINES FOR INITIATING A COOPERATIVE VOCATIONAL EDUCATION PROGRAM

Module C-1

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January, 1978

INTRODUCTION

Any program in its initial stages will profit from adherence to a set of guidelines during its development rather than haphazardly following the whims of the developer. Guidelines give the program planner a road map or set of bench marks to follow in program development. They assure that all aspects of the program operate in harmony with each other and are tied to the same goals.

Because the cooperative education program is highly visible to a variety of interest groups, it has become customary for the teacher-coordinator to establish rapport with each of these groups based on a clear understanding of the purposes and values of the program. In order to present the program clearly and to quash any misunderstandings at the outset, the teacher-coordinator should be well-prepared in all areas of the program and anticipate the concerns and interests of the individual interest groups. One way to establish a foundation of support is to have at hand clearly formulated guidelines.

Guidelines serve several purposes. They provide a common reference point for many groups with interest in the cooperative programs. In effect, they become policy justifiers for students, parents, administrators, businesspeople, and taxpayers, generally. They also supply the material from which objective-based evaluation can be completed. This kind of evaluation can add immeasurably to program accountability.

In this module you are asked to develop some program guidelines. For the successful operation of a cooperative education program, guidelines should be established in all areas of the program. However, in this module you will consider guidelines for only one area of the program, the selection of students.

INSTRUCTIONS

The position of teacher-coordinator of a cooperative education program involves a variety of duties and responsibilities. In order to perform them adequately, the teacher-coordinator must know the characteristics of the program, how the program should operate and the constraints involved. With this knowledge the teacher-coordinator can then formulate guidelines for each area of the program.

Material concerning the operation of the cooperative education program is contained in this module along with suggestions on how to formulate guidelines. You will have the opportunity to develop a set of guidelines for selecting students to participate in a cooperative education program. If you have had experience in establishing guidelines for a new cooperative education program or feel that your skills in this area are adequate and can fulfill the program objective, proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will develop guidelines for initiating a cooperative education program.

ACTIVITY I

Using the guide provided, contact and interview a vocational education teacher-coordinator in your community in order to determine the following information about his or her cooperative education program:

1. The philosophy of the program
2. How the program operaties
3. Constraints and limitations

Write a short synopsis of the program.

ACTIVITY II

Using the information gathered in Activity I, write ten guidelines for the selection of cooperative education students in your community. Get the vocational educator's response to your guidelines. If your guidelines need to be revised, provide a revised copy along with your original.

RESOURCE SECTION

Cooperative education is a partnership between the educative community and the business community, organized to provide on-the-job educational experience for high school students. The primary purpose of this endeavor is education. The program offers students the opportunity to pursue their career objectives through on-the-job training in a business firm and through instruction in related studies in the school. Each program operates under the supervision of the teacher-coordinator.

Ideally every teacher plans to accomplish marvelous things in a cooperative education program. However, without a realistic view of the community, the school and the relationship between them, such efforts are often doomed to failure. The magic of a successful cooperative education program is advance planning. Before the teacher-coordinator can consider placing any student in a business firm, he/she must make a general plan of how to proceed. This means considering all the areas essential to the cooperative education program. The basic components of a program include:

1. Selection of cooperative education students
2. Selection of training stations
3. An educational assistance program for the training sponsors
4. Coordination of the on-the-job training and the school instruction
5. Evaluation of students
6. Provision of related instruction
7. Formation and utilization of an occupational advisory committee
8. Development of administrative policy
9. Establishment of a report and record-keeping system

When all aspects, problems, and possibilities of each component have been thoroughly reviewed, guidelines can be established concerning program operation.

The form and substance of guidelines is affected by three items: the philosophy of the program, how the program should operate, and the constraints and limitations. To be beneficial, the set of guidelines must be internally consistent, reflecting the overall philosophy of the program with the individual statements complementing each other. Because no program operates in a vacuum, the constraints and limitations of the real world will have a great impact on how the philosophical aspects of the program can be implemented. Federal, state and local regulations determine to a large extent how a program must operate.

The most useful type of guidelines for the teacher-coordinator are those written for the operational level of the program. This is done by translating the principles of the program into concrete and practical statements. The statements themselves should be clearly written in a language that is readily understood by everyone. Each statement should be broad enough to allow for individual differences but also specific enough to be selective.

Selection of Students

The objective of cooperative education is to help the students gain the skills that will lead to occupational competency. This is accomplished by placing students as part-time workers in selected business training stations under the guidance of skilled employees who function as on-the-job instructors or training sponsors. The training stations are selected for their potential ability and willingness to provide on-the-job training in accordance with the students' career objective. The teacher-coordinator works with the training sponsors to provide coordination between the on-the-job instruction and the school instruction. The teacher-coordinator also provides assistance to the training sponsors in planning the learning experiences, in evaluating the students' progress and in handling student problems.

Although the teacher-coordinator assumes the major responsibility for the operation of the cooperative education program, he/she works closely with the school administration and the occupational advisory committee.

The purpose of developing student selection guidelines is to ensure that the program has qualified students to place in business training stations. In general, a qualified student includes someone who wants to participate in the program, needs additional help in adjusting to the business world and is capable of profiting from the cooperative educational experience. Because students will apply to the program for a variety of reasons and the ability to accommodate them is limited, it is important to be able to decide which students can benefit most from the program.

Suggestions for Student Selection Guidelines

The following items should be considered in developing guidelines for student selection.

1. Career objective
2. Scholastic record
3. Attendance record
4. Desire to participate
5. Need to participate
6. Capability to benefit from program
7. Pre-requisite skills
8. Legal requirements
9. Personal characteristics
10. Health record
11. Parental permission
12. Transportation
13. Application procedure
14. Time of year for student selection
15. Selection procedure
16. Teacher references
17. Provisions for students with special needs

Synopsis of the Cooperative Education Program

Use this guide to write a synopsis of a cooperative education program in your community.

I. Philosophy of the Program

  A. What are the general and specific objectives of the program?
  B. What is the historical background of the program?
  C. How has the program changed since its beginning?

II. Operation of the Program

  A. Does the program operate year round or according to school calendar?
  B. What resources does the program use?
  C. How is the program staffed?
  D. What is the role of the teacher-coordinator?
  E. What is the role of the school administration?
  F. What is the role of the employer?
  G. Is an advisory committee used?
  H. How is the program managed and supervised?
  I. What reports are necessary?

III. Constraints and Limitations

  A. What federal, state and local regulations affect the program?
  B. What opportunities for the program are available in the community?
  C. What resources are available or not available?
  D. Are staffing requirements easily filled?
  E. Does the program have local community backing?
  F. Are there obstacles to operation?
  G. Is there enough student interest in the program?

FEEDBACK

In cooperation with your resource person, determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource Person
	1. Synopsis of local cooperative education program:	
____	a. includes areas given in guide.	____
____	b. information gathered from a vocational education teacher-coordinator in community.	____
	2. Guidelines:	
____	a. consistent with the information in the synopsis of a local cooperative education program.	____
____	b. written concerning the selection of students for cooperative program.	____
____	c. consistent with federal, state and local regulations.	____
____	d. clearly written.	____
____	e. responded to by a vocational education teacher-coordinator in a community cooperative program.	____
____	f. includes revised copy of guidelines if necessary.	____

Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

Not for mass distribution

IDENTIFY AND SECURE PROSPECTIVE TRAINING STATIONS

Module C-2

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January, 1978

INTRODUCTION

The co-operative vocational education training station is the business setting that becomes the vocational laboratory for students in a co-operative education program. It is important that this laboratory be an appropriate one. Appropriateness is measured with many criteria. This module asks you to apply those criteria to several businesses in the selection of training stations for a portion of [illegible] hypothetical group of students.

INSTRUCTIONS

The training station is the site where the school and the business community unite to provide an educational experience using the resources of both the school and a business. It may be the student's first encounter with the world of work and the employer's first co-operative experience with education. In order to make it a pleasant and profitable experience for both parties, it is necessary for both parties to understand and agree to the purposes, values and methodology of the co-operative education program. The selection of the training stations is the process that can provide the program with the best training stations to accomplish the program goals. This module provides you with the opportunity to select potential training stations in your community and to evaluate them according to the set of criteria provided. If you have had experience selecting training stations, or feel that your skills in this area are adequate and can fulfill the performance objective, proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

With a list of eight hypothetical students with different characteristics and career objectives and a set of training station eligibility criteria, the teacher will select appropriate training stations for three of them from among the businesses in the employment community.

ACTIVITY I

Choose three students from the list of hypothetical students provided in this module and identify two to three potential training stations in your community appropriate to each student's career objectives and characteristics.

ACTIVITY II

Using the training station evaluation instrument provided in this module, evaluate the potential training stations for the three students selected in Activity I and select one training station for each student.

RESOURCE SECTION

Training Stations

The responsibility of securing appropriate training stations lies with the teacher-coordinator. He/she works in co-operation with the school administration and the occupational advisory committee to determine and secure training stations that provide students the most appropriate and complete occupational experiences. In order to assure that a business provides the best experience possible, the teacher-coordinator must examine each potential training station. The criteria established for this analysis will depend on the program the school has and the community in which it operates. Basically, as the teacher-coordinator you will be interested in the employer's attitude toward the co-operative education program, the type of experiences the student can get, the type of equipment and facilities available, the location of the business, the type of on-the-job instruction, and the reputation of the business in the community.

Not all businesses are suitable places for high school students to work as part of a co-operative education program. There are several reasons why a business may be undesirable. Some businesses may not give the student enough different experiences to justify spending half a day on the job. Other businesses don't comply with governmental safety guidelines or are listed as hazardous occupations. And a few employers misunderstand the program and view it as a way to hire cheap labor without providing any educational experience. The selection of the training stations is, therefore, a crucial process in insuring the success of the program.

The first step in securing a training station is to identify businesses which qualify. The list below indicates sources that are useful in developing a roster of potential training stations:

1. Advisory council
2. Business leaders

3. School administrators
4. Current and previous co-operating business firms
5. Telephone books--yellow pages
6. City directories
7. Trade associations
8. Chamber of Commerce
9. Community surveys
10. Personal observation

Secondly, the teacher-coordinator should visit each site for a first-hand observation and an interview with the employer. In order to make the visit successful, the teacher must be well prepared. First impressions are often lasting so the way in which the teacher presents himself/herself and the co-operative education program to the employer may determine whether the employer is interested in contributing his/her time and facilities, and the success of the arrangement over an extended period of time. The teacher-coordinator should follow good interview procedures and be well prepared to fully present his/her program and to answer all questions concerning it as well as to find out as much about the potential training station as possible, using the program's evaluative criteria as a guide.

The final selection of possible training stations should not be made without input from the occupational advisory council and the school administration. Each of these groups represents a different perspective and a vast amount of experience in working with the local business community. Their suggestions and knowledge will help broaden the teacher's understanding of each potential training station and act as a screen through which the collected information can be filtered. Their input in the selection process in invaluable.

From a roster of training stations the teacher can then match the student to the most appropriate training station. The student's career objective will determine which training station will offer the student the most appropriate occupational experience. There are times when the teacher must search for a new training station to accommodate a particular student's career objective. It is important to try to match the student's career objective as closely as possible because occupational experience which is unrelated to the student's interest is not as effective as experience directly related to the student's goals.

Additional Resource

Mitchell, E.F. Cooperative Vocational Education: Principles, Methods, and Problems. Boston: Allyn and Bacon, Inc., 1977.

STUDENTS

All the students listed here are seventeen and seniors in high school.

JUDY

Career objective: motel or hotel desk clerk
--calm with a high frustration level
--expresses herself well, though usually quiet
--likes to work with people
--sometimes procrastinates until the last minute
--junior class vice-president
--math skills, adequate
--Black
work experience: receptionist at a beauty shop (part-time)

JAMES

Career objective: personnel administration
--outgoing
--gets along well with people
--courteous
--likes to meet a variety of people
--creates a good impression
--conservative dresser
--popular in school
--expresses himself well
--can be cynical
--reputable family
--Caucasian
work experience: summer camp counselor-in-training program

DEBRA

Career objective: advertising copy writer
--usually cheerful
--fashion conscious
--talks incessantly
--likes people
--works well in groups brainstorming
--slow to accept responsibility
--flighty
--forgets to complete tasks
--vain about wearing glasses she has and needs
--Caucasian
work experience: drug store salesperson

BILL

Career objective: food marketing manager
--physically strong
--can operate register and make change
--average grades; average to poor study habits
--inhibited
--soft spoken
--limited vocabulary
--usually ill-dressed
--acne problem
--parents divorced, only child
--six points missing from his driver's license
--Caucasian
work experience: none

CONNIE

Career objective: secretary
--concerned about appearance, stylish
--at ease around a variety of people
--likes to talk to friends
--one year of typing, wpm 55-60
--one year of shorthand, wpm 70
--school experience with basic office machines
--tends to pout when she doesn't get her way
--in a hurry to finish things - often overlooks items
--from a military family
--Caucasian
work experience: none

ALLEN

Career objective: data processing
--likes to work with machines and things
--conscientious about his work
--handles concepts well, mathematically oriented
--good organizational ability
--president of Future Business Leaders of America
--rural background
--Caucasian
work experience: Co-op gas station

KAY

Career objective: bookkeeper
--conscientious about details
--not very outgoing
--well-groomed
--dependable

- --grade average: A; courses in beginning bookkeeping and office practice
- --good vocabulary
- --good in math
- --physical disability: had polio as a child, walks without a cane or crutches but with a limp and has trouble with stairs
- --Caucasian

work experience: babysitting

PAUL

Career objective: restaurant owner

- --works hard
- --serious person
- --interested in cooking, particularly gourmet
- --his word is reliable
- --average dress
- --Chicano

work experience: summer job at the Diary Queen

TRAINING STATION EVALUATION INSTRUMENT

Answers of yes to each of the following criteria indicate that the business qualifies as an acceptable training station in the co-operative education program. Answers of no do not automatically disqualify a business as a potential training station but require the teacher to use his professional judgment in deciding how crucial the individual criterium is to the success of the program.

EMPLOYER'S ATTITUDE	YES	NO
1. Does the employer understand and accept the purposes and values of the co-operative education program?	____	____
2. Is the employer willing to co-operate with the school in the co-operative education program?	____	____
3. Is the employer willing and able to provide on-the-job instruction?	____	____
4. Can the employer provide employment for the entire school year?	____	____
5. Will the employer work with the teacher-coordinator in developing a schedule of work experiences which provides exposure to various phases of the occupation?	____	____
6. Is the employer willing to pay the student the wages of a beginning employee?	____	____

EDUCATIONAL OPPORTUNITY		
1. Does the training station provide an adequate range of experience to provide the student with an understanding of the occupation?	____	____
2. Is there an acceptable ratio between students and skilled employees so that the student will have adequate role models?	____	____
3. Is there an employee qualified to act as an on-the-job instructor?	____	____
4. Does the on-the-job instructor understand and accept the purpose and values of the program and accept the responsibility?	____	____

PROFESSIONAL PRACTICES		
1. Is the business known in the community to follow consistent, fair, and ethical business practices?	____	____
2. Is the business an equal opportunity employer?	____	____

3. Is the business stable in terms of financial responsibility, credit ratings, and record of operation? ____ ____

4. Are employees generally satisfied with the working conditions? ____ ____

5. Is absenteeism a problem in this business? ____ ____

6. Does the business currently have a training program for its employees? ____ ____

7. Does the employer comply with all local, state, and federal regulations? ____ ____

EQUIPMENT AND FACILITIES

1. Does the business provide appropriate and sufficient equipment for the student to have ample opportunity to practice the occupation for which the program is designed? ____ ____

2. Is the equipment up-to-date and in good condition? ____ ____

3. Do the facilities provide a safe, clean and healthy environment in which to work? ____ ____

4. Is the business in a location that is accessible to the student and school personnel? ____ ____

FEEDBACK

In co-operation with your resource person, determine whether you have satisfactorily completed the requirements of this module by considering the following items:

Student		Resource Person
	1. Selection of students	
______	a. three from the list of hypothetical students	______
______	b. realistic possibility of finding a suitable training station for the selected student in your community	______
______	c. potential training stations appropriate to student's career objective	______
	2. Selection of training station	
______	a. one training station selected for each student	______
______	b. appropriate to student's career objective	______
______	c. acceptable according to criteria included in this module	______
______	1. employer's attitude	______
______	2. educational opportunity	______
______	3. professional practices	______
______	4. equipment and facilities	______

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Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

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DEVELOP THE TRAINING ABILITY OF ON-THE-JOB INSTRUCTORS

Module C-3

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Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

The on-the-job instructor, or training sponsor, is an important component in any cooperative education program. He/she is the person who oversees the instruction that occurs on the job and assures that the instruction is relevant, appropriate, and educationally accountable. The training sponsor is the laboratory instructor for the school.

It is imperative that the training sponsor have the ability to provide training to student trainees. This ability includes an understanding of the fundamentals of curriculum and instruction. Training sponsor development is the responsibility of the cooperative vocational education teacher. This module requires you to describe, assess and critique the on-the-job training you were given on your present job and develop a list of instructional skills from which you think your employer might benefit.

INSTRUCTIONS

The success of a training sponsor depends on an ability to understand the student worker and to effectively present the necessary materials and experiences to that student. However, the sponsor's own familiarity with and competency in the job may be a handicap because he/she has forgotten how the job was learned and the emotional nature of the experience.

Handling a student with little or no work experience may require additional planning, patience and guidance. It is the teacher-coordinator's responsibility to be aware of the possible problems that the training sponsor may encounter with a student worker. Therefore, in this module you are asked to review your own on-the-job training and to prepare a list of guidelines that will help a new training sponsor to consider how to work with a student worker successfully. If you have had experience working with training sponsors or feel you can fulfill the performance objective, proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will write a descriptive analysis of the training he/she received in his/her current job and from that description will develop a list of training guidelines from which his/her employer might benefit.

ACTIVITY I

Using the guide provided in this module, write a description of the training you received in your current job.

ACTIVITY II

Analyze your training as described in Activity I and develop a list of training guidelines you feel would help the training sponsor relate to the student and make that training successful.

RESOURCE SECTION

Training Sponsor

The training sponsor is a very important person in the cooperative education program. Because of the amount of time he/she spends with the students and his/her role as guide to the world of work, the training sponsor strongly influences the student's attitude and knowledge of the business world. As a team, the teacher and the training sponsor can provide the student with a well-organized, relevant, and pleasant learning experience.

The training sponsor is a person competent in a role working and supervising others in a business. The role of instructor, however, may be a new experience, and he/she may need some assistance from the teacher-coordinator to fill it effectively. In any case, the responsibility of providing training to high school students is too great to assume that the training sponsor knows what to do. The teacher-coordinator must establish rapport with the training sponsor so that they can work together as a team to train the students.

Developing this rapport takes careful planning and the use of interpersonal skills. The cooperative nature of this program cannot be overstated. The training sponsor must be respected for his/her knowledge and experience, and the teacher-coordinator should act as a resource person, who provides assistance, suggestions, and educational support without dictating to the training sponsor. The more input the training sponsor can give to the decision-making process, the more personally involved and concerned he/she will become with the results of the program.

The success of the training will depend upon a clear understanding of what is to be done and the application of the best methods to that task. Before the student reaches the training station, the teacher-coordinator and the training sponsor should discuss the purposes of the program, agree on a training plan and reach a working agreement on how to proceed. The teacher-coordinator should clearly explain how the school instruction can be correlated and used to assist the training. The areas of responsibility should be understood and agreed to. The teacher's knowledge of the individual students and the training sponsor will help during the adjustment period if this knowledge is shared with the respective parties.

The teacher-coordinator needs to constantly monitor the training to see how it is going. There are several ways to get feedback regarding the success of the training. If the student writes job-experience reports, these will tell the teacher-coordinator what the student is doing. Careful analysis of these reports should reveal potential problems, strengths of the training and misunderstandings. Personal conversations with the student and the training sponsor and observation of the student at work will provide additional clues to the situation. If the program has been in operation for several years using the same firms, follow-up studies of the program's graduates will also provide information regarding the success of the training both on their training job and in their present jobs. Finally, it is also possible to anticipate possible areas of trouble by frequent reference to current occupational or task analyses and a thorough knowledge of the occupation.

ANALYSIS OF ON-THE-JOB TRAINING

The following questions are a guide to help you remember and consider the various aspects of the on-the-job training you received in your present job.

1. Who trained you? Was one person responsible or did various people work with you in a training capacity?

2. Were you shown how to do your job or told how to do it?

3. Did you get the necessary background knowledge needed to understand your job?

4. Were you provided with manuals or printed guidelines?

5. Were there manuals or printed guidelines available?

6. Did you progress from simple uncomplicated tasks to more difficult and intricate tasks?

7. Were the instructions consistent? Were the instructions clearly explained?

8. Did you have the opportunity to practice the task adequately?

9. Did you have the opportunity to practice with your supervisor?

10. What type of supervision did you receive as you learned a new task?

11. What type of feedback did you get? Positive? Negative?

12. Could you talk to your instructor about the problems you had with the tasks?

13. What were the strengths in your training?

14. What were the weaknesses in your training?

15. Did your training follow a systematic plan?

16. Did the instructor give you a basic orientation to your new work environment, including staff, facilities, and procedures?

17. Was the training relevant to the tasks you were asked to perform?

18. Did you have the appropriate equipment on which to practice?

FEEDBACK

In cooperation with your resource person, determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource Person
	1. Description of Training	
________	a. description of training received in the current job	________
________	b. includes areas outlined in guide	________
________	c. includes both strengths and weaknesses	________
	2. Training guidelines	
________	a. initial introduction of student to work environment	________
________	b. organization of material	________
	c. teaching of tasks	
________	1. use of background information	________
________	2. use of supplemental materials	________
________	3. sequencing of tasks	________
________	4. feedback	________
________	d. amount and type of practice	________
________	e. supervision	________

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Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

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DEVELOP TRAINING AGREEMENTS AND TRAINING PLANS FOR PLACING STUDENTS ON THE JOB

Module C-4

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

A unique feature of the cooperative method in vocational education is the student-learner at work in a training station. Too often that work experience suffers from inadequate planning and control. Without the safeguards of planning and control, the student's experience frequently degenerates into a monotonous collection of days at work with no competency development.

The remedy to this problem is, of course, good planning and control of the work experience. Training agreements and training plans contribute positively to the vocational education experience of the trainee.

The objective in this module encourages you to work with the owner or manager of your place of employment to develop a cooperative education training agreement and a training plan.

INSTRUCTIONS

The difference between a cooperative education program and a work experience is the deliberate and systematic training the student receives in preparation for job competency. In the cooperative education program, the nature and scope of the training is negotiated by the employer and teacher-coordinator prior to placement of the students. Training agreements and training plans provide written evidence of planning and serve as reminders throughout the training period of mutually agreed upon procedures. This module provides you with the opportunity to develop a training agreement and a training plan for a business in your community. If you have had experience in this area or feel you can fulfill the performance objective, proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

Working cooperatively with an employer or manager at the place of employment, the teacher will develop a training agreement and a training plan suitable for use with a cooperative education student in that business.

ACTIVITY I

Using the sample training agreements provided in this module as guides, draft one training agreement suitable to your place of employment. Use your employer's suggestions and get his/her approval of the final draft.

ACTIVITY II

Create a hypothetical student with a specific career objective and develop a training plan for the first two months of that student's employment. Use the sample training plan as a guide and work with your employer.

RESOURCE SECTION

The successful placement of students in training stations relies on the teacher-coordinator's ability to bring the appropriate parties together in such a way that each party is aware of the responsibilities, purposes and expected outcomes of the program. To do this, the teacher-coordinator must clearly present all aspects of the cooperative program to the employers, students, and parents. Training agreements and training plans clarify policy and serve as a reminder of the scope, nature, and sequence of the training.

Training Agreements

The training agreement is a document that succinctly summarizes and records the arrangements made between the school, the business and the home. It includes the responsibilities, conditions, and participants of a cooperative vocational program. It is not a legal document but a written record of the arrangements made to place a student in a training station. Each person's signature on the agreement indicates that the participant is aware of the conditions of the program and is in agreement with them. Any changes in the agreement should be agreed upon by all participants.

There is no standardized training agreement format. Each teacher-coordinator should draft a version that is applicable and appropriate to the business and the community in which it will be used. However, several general types of information are usually included in the agreement:

1. Student's name, address, telephone, pertinent personal data
2. Training station, address, telephone, training sponsor
3. Name of high school, teacher-coordinator, telephone
4. Student's career objective
5. Current date, training period dates, work hours, rate of pay
6. Responsibilities of school, employer, student and parent
7. Parent's (or guardian's) name, address, and telephone
8. Signatures of participants

Training Plans

The training plan outlines what types of experiences the student will have on the job and what competencies will be developed. Its utilization is a logical and systematic way of arranging the curriculum followed during the training period so that the student will receive the greatest variety of learning experiences in the time allotted. The training plan includes the competencies to be developed, objectives, an indication of whether the instruction is to be given at the training station or at the school, a time schedule for task completion, and a plan for evaluation. Organization of the student's plan should be based on the individual's student's career objective and be finished before the student begins work. Any alterations or changes should be worked out jointly by the training sponsor and the teacher-coordinator.

Sample Training Agreement I

Student's Name ______________________________ Date of Birth ____________

Address ____________________________________ Telephone ______________

Social Security Number ______________________

Parent's (Guardian's) Name __________________ Bus. Telephone ___________

Address ____________________________________ Res. Telephone ___________

Training Station ____

Address ____________________________________ Telephone ______________

Training Sponsor ____________________________

Beginning Employment Date ____________ Expected Completion Date __________

Student's Career Objective ____

Average Working Hours Per Day _______________ Rate of Pay _____________

Does the federal minimum wage apply? ___________

RESPONSIBILITIES

Student

1. To follow the rules and regulations of the school and business.
2. To accurately keep the required training records.
3. To maintain regular attendance both on the job and in school.
4. To consult the teacher-coordinator with problems.
5. To contact the teacher-coordinator before resigning.

Parents

1. To agree to place the student in the cooperative vocational program.
2. To provide transportation to and from the training station.
3. To encourage the student to act responsibly.

Teacher-Coordinator

1. To arrange related instruction in the school and to offer advisory service to the student and the training sponsor.
2. To supervise the program.
3. To conduct visitations, conferences and evaluations.

Sample Training Agreement I (cont'd.)

Employer

1. To provide a broad variety of occupational learning experiences.
2. To adhere to all local, state and federal regulations.
3. To contact the teacher-coordinator before dismissing a student.
4. To assist in the evaluation of the student.
5. To provide the student safe-working conditions.

SIGNATURES

Student______________________________ Employer___________________________

Parent_______________________________ Teacher____________________________

Sample Training Agreement II

Student____________________

Address____________________

Telephone____________________

Social Security Number__________

Date of Birth____________________

Career Objective________________

Parent's Name__________________

Bus. Telephone__________________

Employer____________________

Address____________________

Telephone____________________

Date Employment Begins__________

Expected Completion Date__________

Hours Work Per Day______________

Rate of Pay____________________

Does federal minimum wage apply?_____

Some responsibilities of program participants:

1. The employer will adhere to all local, state and federal regulations.
2. The coordinator will provide related instruction in the school and advisory service to the student and training sponsor.
3. The student will follow the rules and regulations of the school and business.
4. The employer will provide a broad variety of occupational experience.
5. The parents will provide or make arrangements for transportation to and from the training station.

Job Activities	% of Time	Related Instruction
1st semester__________		1st semester__________
2nd semester__________		2nd semester__________

Signature of persons approving this program:

Student____________________

Parent (Guardian)________________

Employer____________________

Coordinator____________________

Sample Training Plan

Occupational Training Plan for the School Year *1977-78*

Student's Name *Debbie Cameron*

Career Objective *Restaurant Hostess*

Training Station *The Four Seasons Restaurant*

Training Sponsor *Allen Thompson*

Teacher-Coordinator *Jane Williams* High School *Conestoga*

Time Span	Learning Experiences	School	Training Station	Evaluation
1 week	*Preparing Customer Serving Area*			
	1. Table Settings	*X*	*X*	
	2. Linens	*X*	*X*	
	3. Table Accessories	*X*	*X*	
	4. Housekeeping	*X*	*X*	
	5. Table Placement	*X*	*X*	
1 week	*Customer Service*			
	1. Greeting	*X*	*X*	
	2. Seating	*X*	*X*	
	3. Menu Presentation and Suggestions	*X*	*X*	
3 weeks	*Customer Payments*			
	1. Check to see if bill is correct	*X*	*X*	
	2. Accept payment	*X*	*X*	
	3. Payments by check or credit card	*X*	*X*	
	4. Cash register operation	*X*	*X*	
	- Courtesies	*X*	*X*	

FEEDBACK

In cooperation with your resource person, determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource Person
	1. Training agreement	
_______	a. includes pertinent demographic data	_______
_______	b. lists responsibilities of participants	_______
_______	c. includes signatures of participants	_______
_______	d. has approval of employer	_______
_______	e. was developed for a particular training station in the community	_______
	2. Training plan	
_______	a. includes employer input	_______
_______	b. provides learning activities for two months for a hypothetical student	_______
_______	c. is written in an acceptable format	_______
_______	d. was developed for a specific training station in the community	_______

Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

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COORDINATE AND SUPERVISE ON-THE-JOB INSTRUCTION

Module C-5

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

Coordination and supervision of on-the-job instruction are the main out-of-school activities of the teacher-coordinator. They provide the link between the employer and the school. The terms "coordination" and "supervision" cover a wide variety of professional tasks related to assuring that the on-the-job training experience of students is educationally sound. Some of these coordination and supervision activities are observing students on the job, scheduling of coordination visits, assuring that safe working conditions exist for students, working to solve student-learner problems, working with training sponsors to assure adherence to training plans, as well as many other activities. In this module you are asked to develop a coordination and supervision plan for a cooperative education program. You are also asked to consider the problems related to the cooperative education program and to suggest a solution to one problem.

INSTRUCTIONS

The program requirements of the various components of cooperative education cause the vocational teacher to assume different roles throughout the year. These roles include planner, teacher, counselor, evaluator, professional educator, public relations specialist, supervisor and coordinator. To handle the responsibilities of each of these roles successfully, the teacher-coordinator must develop strategies for each stage of operation. This module is designed to help you develop a strategy for coordinating the on-the-job instruction with the school instruction. If you have had experience supervising and coordinating cooperative education programs and feel that your skills are adequate and can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will develop a strategy for supervision and coordination of the cooperative education program.

ACTIVITY I

Consider your current place of employment as one of 10 training stations in a cooperative education program of which you are the teacher-coordinator. As the teacher-coordinator, develop a strategy for supervising and coordinating the training at these training stations for the first six weeks of school. Assume that the students are already at work in the various training stations, the training agreements and plans have been written, and the training sponsor has been through an orientation. In developing your supervision and coordination strategy consider:

1. a schedule of coordination visits
2. a system to gather information about the on-the-job experience to supplement your personal visits
3. what to observe during a visit
4. how to visit a business
5. the necessary materials for record keeping that are needed by you, the student, or the training sponsor
6. problems during the training adjustment period of the first six weeks of school

ACTIVITY II

Continue to consider yourself as the teacher-coordinator of a cooperative education program. Select a general problem that might occur during the training adjustment period and develop in-school instruction that will help to alleviate the problem.

Periodic visits to training stations are the customary way for the teacher-coordinator to determine the progress of the program. The purpose of the visits will vary, and a visit may be scheduled by the teacher-coordinator for the following reasons:

1. To observe the student's adjustment to work
2. To provide educational assistance to the training sponsor
3. To evaluate the student for grading purposes
4. To inform the employer and training sponsor about related instruction
5. To observe the working conditions and patterns at the training station
6. To solve problems
7. To check on use of the training plan and the training methods
8. To demonstrate interest in both the student and the employer
9. To cooperatively develop a student's training plan

These visits are business calls. Because time is a valuable commodity to all participants in the program, visits should be designed to accomplish a purpose and to disturb the operations of the business as little as possible.

It is very important that the teacher-coordinator work out a schedule of visitations. So many school demands are placed on the teacher's time that unless he/she has formally committed time to visitations, this phase of the program may be slighted. Students should be visited on the job at least once a month and ideally once every two weeks throughout the year. The actual schedule and the number of coordination visits will, however, depend on the program and the students and businesses in it. The coordinator should begin visitations early in the school year and conduct them frequently throughout the adjustment period. As the school year progresses, other factors that will determine the frequency of visitations include the number of students in the program, the maturity of their performance on the job, the competence of the training sponsors, and the geographic location of the training stations. Of course, the employer's wishes in this matter must also be seriously considered.

The amount of time devoted to coordination responsibilities will vary somewhat with each program. As a general rule the teacher-coordinator should allow approximately one-half hour per student per week for coordination responsibilities. This time includes not only the visit but also the preparation.

The preparation for a coordination visit can be broken down into several steps:

1. Determine the purpose of the visit.
2. Identify the people to be contacted and the activities to be observed.
3. Review the student's training plan and additional reports that may have been written.
4. Identify and collect the materials that are pertinent to the visit, such as appropriate reports, instructional materials, and announcements.
5. Arrange an appointment with the employer.

Because it is impossible for the teacher-coordinator to personally observe each student in the work environment for any great length of time, he/she must develop a system of gathering information which supplements his/her personal visits and observations. This can be done by getting information about the training experience from both the student and the training sponsor through either formal reports or informal discussions. In either case, it is the teacher-coordinator's responsibility to determine what information is necessary and what collection method is the most appropriate for the cooperative education program.

The systems used vary according to the individual differences of each program. Some teacher-coordinators have organized a series of reports that are periodically filed by both students and training sponsors. These reports range from specific checklists to open-ended comment sheets. Other teacher-coordinators keep a log of visits and the discussions held during the visits. The system of recordkeeping adopted by the teacher-coordinator will be influenced by the administration. Because the coordination time allotted to coordination is usually time away from the school, administrators often require complete records of the amount of time spent and how it is spent to justify the teacher's release from the school building.

Samples of reports are included in this module to show the types of forms that are used in cooperative education. The selection of forms presented is not suitable for every program The teacher-coordinator assumes the responsibility of deciding which reports are valuable to him/her and can be used to improve the educational opportunity presented to the student. If a program becomes too bogged down in report writing, less time will be given to instructional activities. This does not suggest that reports should be avoided, only that they should be used wisely to aid in the accomplishment of the program objectives. The selection of forms presented in this module include samples of:

1. a student information form
2. a coordinator's visitation report
3. a student performance review form
4. a coordinator's observation report
5. a coordinator's monthly report
6. student reports

The reason for any system of reporting is, of course, to help the teacher-coordinator determine if the student is benefiting from the program or whether adjustments need to be made. In most cases, students will need the teacher-coordinator's assistance in adjusting to the training experience. The teacher-coordinator can anticipate some of the situations and problems that will occur in the initial stages of the training. Together with the training sponsor he/she can co-ordinate the instruction that is given in school so that it complements the instruction and on-the-job experience of the training station.

The situations and problems that must often be dealt with include adjusting to the work environment, learning to work together with other people at varying levels of responsibility, and developing job skills, appropriate work habits and attitudes.

Sample Student Information Form

Name____________________ Date____________________

Home Address____________________ Telephone____________________

Parent/Guardian____________________

Training Station____________________

Address____________________ Telephone____________________

Training Sponsor____________________

Date Enrolled____________________ Date Completed____________________

Career Objective____________________

CLASS SCHEDULE

Period	Class	Room

WORK SCHEDULE

Day	From	To
Sun.		
Mon.		
Tues.		
Wed.		
Thurs.		
Fri.		
Sat.		

Sample Visitation Report

Student______________________________

Training Station______________________ Training Sponsor____________________

Date	Purpose of Visit	Observations/Comments

Sample Visitation Report

Name____________________ Date____________________

Training Station____________________ Supervisor____________________

Purpose of Visit____

Coordinator____________________ Time of Visit____________________

Record activities, comments and plans discussed. Include both compliments and criticisms.

Student:

Training Sponsor:

Teacher-Coordinator

Sample Student Performance Review

Student________________________________

A. Attitude Toward Work

____ 1. Just gets by

____ 2. Usually comes through

____ 3. Needs reminding

____ 4. Aware of deadlines

____ 5. Forgetful

____ 6. Procrastinates

____ 7. Plans ahead

____ 8. Tries to improve

____ 9. Shows little interest

____ 10. Finishes an assignment

____ 11. Enthusiastic

____ 12. Wastes time

____ 13. Handles responsibility well

____ 14. Needs supervision

____ 15. Adapts well to changes

____ 16. Likes routine

____ 17. Good attendance record

____ 18. Frequently absent

Comments:

____

B. Working With Others

____ 1. Usually cheerful

____ 2. Not always pleasant

____ 3. Good team-worker

____ 4. Lone wolf

____ 5. Causes trouble

____ 6. Welcomes suggestions

____ 7. Sensitive to correction

____ 8. Argues a lot

____ 9. Accepts work assignments well

____ 10. Gripes

Comments:

____

C. Initiative

____ 1. Self-starter

____ 2. Alert

____ 3. Needs some supervision

____ 4. Needs occasional prodding

____ 5. Never starts work without supervision

____ 6. Other______________________
specify

Comments:

D. Knowledge of Job

____ 1. Well-informed

____ 2. Adequate knowledge of essentials

____ 3. Needs assistance

____ 4. Inadequate knowledge

____ 5. Unsuited for the position

Comments:

E. Quality of Work

____ 1. Consistent errors

____ 2. Some errors

____ 3. Usually well done

____ 4. Does neat work

____ 5. Does sloppy work

____ 6. Each job must be carefully inspected

____ 7. Work reliably completed

____ 8. Needs more skill

____ 9. Needs greater knowledge of job

Comments:

F. Public Relations

____ 1. Dressed appropriately

____ 2. Sloppy attire

____ 3. Overdressed

____ 4. Gossips

____ 5. Grumpy

____ 6. Pleasant to work with

____ 7. Polite and courteous

____ 8. Not always polite

Comments:

G. Quantity of Work

____ 1. Works at capacity

____ 2. Can do more

____ 3. Often needs help to finish

____ 4. Helps others

____ 5. Needs more job skill

____ 6. Produces above average

Comments:

Sample Coordinator's Observation Report

Training Station________________________ Student__________________________

Supervisor______________________________ Date______________________________

Observe and Evaluate

1. Personal appearance and characteristics

2. Skills and tasks being learned

    a.

    b.

    c.

3. Relationship between supervisor and student

4. Areas of strength

5. Areas of weakness

6. Conference needs

Sample Monthly Coordinator's Report

Program______________________________ Month__________ Year____________

Date	Activity Code	Student	Mileage and Expenses	Observations/Comments

Activity Code:

A. Visitation to Training Station
B. Public Relations
C. Advisory Committee
D. Club Work
E. Guidance and Counseling
F. Instructional Materials
B. Coordination
H. Administration

Total Mileage______________________

Additional Expenses________________

Signature__________________________

Sample Student's Weekly Report

Name______________________________ Week Ending______________________

Training Station__________________ Training Sponsor__________________

Record the learning activities you are working on this week, both at your training station and in class. Include suggestions that will help you gain more from these activities.

Day	Training Station	Classroom	Suggestions
Mon.			
Tues.			
Wed.			
Thurs.			
Fri.			

Sample Student Report

Name________________________ Week Ending________________________

Training Station________________ Training Sponsor________________

Record activities performed this week, including both new learning activities and routine tasks. Record the number of hours worked this week.

NEW ACTIVITIES	ROUTINE ACTIVITIES

HOURS WORKED	S	M	T	W	T	F	S	TOTAL

Describe an activity you enjoyed this week or a comment that made you feel good.

Describe an activity or situation that you had trouble handling this week.

Potential Problems to Consider in Related Instruction

1. Interacting and relating to co-workers, supervisors, and employers
2. Developing appropriate work habits and attitudes
3. Adjusting to the work environment
4. Developing necessary job skills
5. Misunderstandings concerning wages, hours, benefits
6. Appropriate grooming and behavior
7. Meeting and working with the public
8. Job responsibilities
9. Quality and quantity of work expected
10. Reaction to supervision and criticism
11. Initiative
12. Problem solving methods

FEEDBACK

In cooperation with your resource person, determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource Person
	1. Strategy for supervision and coordination	
______	a. schedule of visits	______
______	b. information gathering system	______
______	c. purpose of visit	______
______	d. visitation procedure	______
______	e. record keeping materials	______
______	f. anticipated problems	______
	2. Problem	
______	a. identification of a problem that could occur during adjustment period	______
______	b. related instruction to solve the problem	______

Prepared by The Center for
Vocational Teacher Education
University of Nebraska–Lincoln

Developed under contract with the U.S. Office of Education
Part C Vocational Education Research grant.

Not for mass distribution

EVALUATE STUDENTS
ON THE JOB

Module C-6

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

Evaluation of movement toward goals is the step in curriculum development and instruction that lends credence to education. Since vocational educational goals are stated and educational credit is offered for on-the-job training in cooperative education, measurement of the achievement of these goals and accountability for the credit provided is mandatory.

It is a well-known principle of human behavior that people tend to support that which they help to create. In that regard, it is useful to involve the training sponsor in the development of training plans for student, including the evaluation portion. In this module you are asked to involve a training sponsor in the development of an evaluation instrument that is appropriate for a particular business and for cooperative education students.

INSTRUCTIONS

Evaluation of students on the job should be continuous. By means of the evaluation process an assessment can be made of how well the student is progressing, whether the objectives are being met, if the training plan is being followed, whether problems are starting to occur, and what the strengths and weaknesses of the program are. Because of its importance in all areas of the program, an evaluation procedure should be established prior to placing students in training stations.

This module provides you the opportunity to consider the area of on-the-job evaluation by developing an instrument that a training sponsor will use to evaluate student workers. If you have had experience developing evaluation instruments or feel that your skills are adequate and fulfill the performance objective, proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher, with the help of an employer, will develop an evaluation instrument to be used by a training sponsor for a student on the job.

ACTIVITY I

Analyze the employee evaluation or review instrument used in your place of employment. Decide whether the instrument can be modified and used for evaluating a cooperative education student. Provide a rationale for your decision. If your place of employment has no formal instrument, describe the employee evaluation or review method used.

ACTIVITY II

Develop an evaluation instrument that could be used by your employer for periodic evaluation of a cooperative education student in your place of employment. Either modify the existing employee evaluation form or create a new instrument using the sample evaluation instruments in this module as guides.

RESOURCE SECTION

Student evaluation is an important part of both the teacher-coordinator's and the training sponsor's job. Much of the responsibility lies with the teacher-coordinator. During periodic visits to the training station, he/she should formally and informally evaluate the student's progress and observe the working relationship. Moreover, because the training sponsor works so closely with the student on a daily basis, his/her assessment of the student's progress is invaluable. The teacher-coordinator must, therefore, work closely with the training sponsor to establish an evaluation process and develop an evaluation tool that is well understood and used to benefit the student.

Evaluation is sometimes viewed as a judgmental verdict of good or bad. The teacher-coordinator may have to deal with this misconception with both the student and the training sponsor. The cooperative education program evaluation should be viewed as a prodedure that helps the participants understand what is being accomplished. In this way evaluation no longer remains a mysterious process but is seen as closely tied to the program objectives. It is a checking procedure to see how well the program is accomplishing what it is intended to accomplish.

In establishing an evaluation procedure, the teacher-coordinator should work closely with each training sponsor on an individual basis. Therefore, the teacher-coordinator must be prepared to explain the procedure, provide examples, and show how the evaluation process and the training plan are related.

One question that needs to be answered before the student begins work is how the training sponsor's evaluation will be used. Will the evaluation be used as part of the student's grade or as a progress report? In considering this question, you must be aware that you will be working with a number of training sponsors in various occupations, each of whom uses a different standard to measure progress and success. Because these training sponsors are not experienced in the field of education, there may be difficulty in maintaining a consistent grading standard among them. For this reason, some programs conduct the on-the-job experience on a pass/fail basis. This reduces the stress between training sponsor and the student and places the responsibility of determining grades on the teacher-coordinator who is experienced and competent to perform the duty.

Arrangements should also be made for a conference with the student about the evaluation. In some cases the training sponsor reviews the rating with the student and in other cases the teacher-coordinator reviews the rating. However it is accomplished, it should be done to help the student improve his/her performance. Therefore, it is wise to outline the student's strengths before suggestions for improvement and corrections are made. Comments concerning the student's work and behavior should be carefully thought out and fully explained to prevent any misunderstandings, and constructive suggestions should be given for improvement in problem areas.

Getting the evaluation form to the training sponsor is a matter of personal preference. Although the form can be mailed or delivered during a coordination visit, it is suggested that a special conference be scheduled between the teacher-coordinator and the training sponsor shortly before the end of a grading period to review the procedures to explain the form and to make suggestions.

The format of evaluation instruments varies widely according to the firm involved and to the type of program in which the student is enrolled. The evaluation form should be designed to accommodate these individual differences. However, certain qualities or characteristics are universally important in the world of work and are usually included in any type of form. Some of these characteristics include

1. Ability to get along well with others
2. Ability to follow directions
3. Quality of work
4. Appearance
5. Cooperativeness
6. Response to supervision
7. Quantity of work
8. Interest in work
9. Communication skills
10. Dependability
11. Attendance and punctuality
12. Initiative
13. Ability to learn

Because the training plan is designed to provide the student with a series of progressive learning activities, some skills are not introduced or included in every grading period. To tailor the evaluation form to fit the students individual training plan, several blank lines can be designated for the appropriate skills learned and practiced during the evaluation period. In this way, the form allows the addition, deletion or advance rating of specific skills areas and closely reflects progress as outlined in the training plan.

An evaluation instrument does not need to be complex. A simple form that is clearly written and identifies key personality characteristics and skills is as effective as a more complex model. The physical format of the evaluation instrument is not nearly as important as how it is used. It is more important to have a systematic process of checking practiced with the intention of improving the program opportunities for the student and of providing feedback about past performance than an elaborate evaluation form.

Sample Employer's Student Evaluation Form

Student *Ann Smith*　Career Objective *secretary*

Training Station *Star Insurance Co.*　Training Sponsor *Jane Williams*

Beginning Employment Date *9/15/77*　Completion Date *5/22/78*

Rating Code: 1. excellent 2. good 3. satisfactory 4. poor 5. unsatisfactory

Characteristics	Grading Periods					
	1st	2nd	3rd	4th	5th	6th
1. Attendance and punctuality						
2. Ability to work with others						
3. Appearance						
4. Willingness to learn						
5. Ability to follow instructions						
6. Initiative						
7. Cooperativeness						
8. Quality of work						
9. Quantity of work						
10. Ability to take correction						
11. Thoroughness						
12. Interest in the work						

Job Skills	Grading Periods					
	1st	2nd	3rd	4th	5th	6th
Typing						
Shorthand						
Oral communication skills						
Written communication skills						
Skill in operating office machines						

Signature of Training Sponsor____________________________ Date____________

Signature of Training Sponsor____________________________ Date____________

Signature of Training Sponsor____________________________ Date____________

Signature of Training Sponsor____________________________ Date____________

Signature of Training Sponsor____________________________ Date____________

Signature of Training Sponsor____________________________ Date____________

Sample Evaluation Form

Student____

Training Station________________________________

Period Covered_________________________________

Directions: Place a check in the appropriate blank following each statement. Additional comments can be written at the bottom of this form.

	Highest				Lowest
	1	2	3	4	5
1. Does the student work well with others?					
2. Is the student willing to learn?					
3. Is the student conscientious in the use of equipment?					
4. Does the student accept responsibility?					
5. Is the student neat and appropriately dressed?					
6. Does the student follow directions?					
7. Is the student cooperative?					
8. Is the student physically able to perform the work?					
9. Rate the quality of student's work.					
10. Rate the quantity of student's work.					
11. Is the student tactful and courteous in dealing with people?					

	Highest				Lowest
	1	2	3	4	5
12. Does the student fulfill obligations?					
13. Is the student progressing through training plan at an acceptable rate?					
14. Do you periodically review the training plan?					
15. Does the student observe company rules?					
16. Does the student practice safety procedures?					
17. Is the student's knowledge of the job appropriate for this stage of training?					
18. Is the student interested in the work?					

Additional Comments:

Signature of Training Sponsor______________________________ Date__________

FEEDBACK

In cooperation with your resource person determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource Person
	1. Review of firm's evaluation instrument	
________	a. decision made as to whether instrument can be used or modified for student workers	________
________	b. rationale for decision provided	________
________	c. explanation of evaluation procedure if no evaluation form is available	________
	2. Evaluation instrument	
________	a. clearly written	________
________	b. appropriate for a specific business	________
________	c. provides room for comments	________
________	d. developed with the employer	________
________	e. provides periodic ratings	________
________	f. based on training plan	________

PROVIDE SERVICE TO AND MAINTAIN LIAISON WITH MEMBERS OF THE COMMUNITY

Module D-1

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

All vocational programs and vocational educators function within some community. That community usually provides fiscal support for the program, input to the vocational curriculum, and employment for graduates of the program. It is, therefore, important for the vocational program and vocational educators to provide various communication links between the community and the program. These links might include newsletters, surveys, open houses, or news media. They would carry information about such things as program goals, employment data, student interests, and new developments in business.

In addition, as the academic center of the business community, the vocational program carries with it some responsibility for the continuing education of the members of the business community. The objective chosen for this competency combines the service and liaison components of the competency when it asks you to conduct an abbreviated needs assessment and develop a subject matter outline for a business-oriented adult education workshop. This will develop skill and experience in needs assessment (a useful skill in vocational education) and in providing service to the business community.

Other activities could be developed to provide service to and maintain a liaison with the community. We offer the following suggestions as a reference list for possible future use.

1. Prepare for the business community a newsletter regarding a vocational program.
2. Utilizing help from vocational students, conduct a market research activity for the business community.
3. Provide an employment service in the school to serve the business community.

4. Serve in community, civic, or professional organizations.
5. Plan an employer-employee function for a cooperative education program.
6. Develop a media campaign describing the vocational program.
7. Plan and conduct an open house in the vocational program for business people.

INSTRUCTIONS

This module contains materials designed to provide information and experience in the area of needs assessment. Background information concerning needs assessment surveys, questionnaire construction and sampling has been provided in the module followed by two activities which offer you the opportunity to apply this information in the business community. If you feel confident in your needs assessment skills and can fulfill the performance objectives, proceed to the activities and feedback.

PERFORMANCE OBJECTIVES

Terminal: After constructing and conducting an abbreviated needs assessment, the teacher will develop a subject matter outline for a one-day adult education workshop for members of the business community.

ACTIVITY I

Construct a questionnaire of at least five questions designed to provide information regarding the need for a workshop on orientation training. Choose three questions from the questionnaire items provided and draft two questions of your own. Arrange them in an appropriate order, provide your own explanation or cover letter for the questionnaire and administer the questionnaire to a minimum of ten employers.

ACTIVITY II

Tabulate the responses to the questionnaire on a blank copy of the questionnaire. From your analysis of the results, write a subject outline for a workshop.

RESOURCE SECTION

Needs Assessment

The decision to supply some type of vocational education opportunity is usually based on the assumption that a need exists which can be satisfied by the program. Although there are many definitions of a need, it is generally accepted that a need is a discrepancy between what is and what should be. You, as a teacher, will seek to create a situation and supply instructional aid aimed at removing or minimizing the discrepancy. To accomplish this you must assess the situation carefully or you may provide educational activities which have no relationship to the need.

In planning an educational program, you should consider three sources of needs: 1) the people you will be working with, 2) the organization or institution you work for, and 3) the community you are a part of. Each of these elements will provide you with part of the framework within which you must work. The needs of the individuals will be the most related to the planning of a program, but consideration of the needs of the institution and the community will help to insure your success. The resources and restraints which you will experience will probably come from these two areas.

Your employment situation will determine the type and complexity of needs assessment method for the most part. In some instances assessing needs may mean reevaluating data already present in management or personnel records. At other times a formal needs assessment instrument must be constructed, administered and analyzed. The methods available are varied and should be chosen to suit the task and the resources available.

Regardless of method or combination of methods, the following criteria should apply. The instrument should have validity so that you actually measure what you intend to measure, reliability so that the process can be repeated with the same results, and practicality and simplicity so that it is manageable in terms of cost, time and convenience in administration and tabulation.

From among the various methods of needs determination, the questionnaire has been chosen. This method is one of the most popular because it has the potential to supply the teacher with much information at little expense. However, because the questionnaire does not include a face-to-face encounter with the teacher, it requires the teacher to know what to ask and how to ask it clearly and succinctly.

Questionnaire Construction

The construction of a questionnaire should be undertaken with care and forethought. Because the recipient is usually a busy individual, completion of the questionnaire will compete with his/her other tasks and duties. Therefore, the questionnaire must be carefully constructed and clearly presented. The respondent will be more likely to answer a questionnaire that clearly states its purpose, is concise and clear in its questions, and requires a minimum of effort to complete.

At all stages of questionnaire construction you must clearly identify the purpose the questionnaire is to serve. The reason for conducting a needs assessment should dictate the scope and complexity of the questionnaire. It is a tool, an instrument, to be used in the completion of a task. If it becomes more, it can become the focal point of your efforts and obscure or supersede its original purpose. A clear understanding will help you to design an instrument in such a way that you will gather the data you need but not more than is needed.

Construction of a questionnaire involves several steps. Individual items should be drafted and arranged in some logical sequence. Next, the questionnaire should be pilot-tested on a small group representative of the sample but not including anyone from the sample population. The pilot test is crucial because it will reveal any weaknesses in the questionnaire, such as ambiguities, value-laden questions, misunderstandings, faulty sequencing, poor directions or unexpected responses. After revisions have been completed, the questionnaire is ready for distribution to the sample population.

The following notes and examples, though not inclusive, are designed to provide you with some guidelines for questionnaire construction. The ultimate rationale for including or excluding items in a questionnaire is whether the item will serve the purpose of the questionnaire and be appropriate to the sample population.

A. Organizing the questionnaire

1. Place the easiest questions first in order to establish a pattern that answering the questionnaire is a pleasant experience.

2. Questions that have emotional ties, such as those concerning salaries or personal items, should be placed toward the end of the questionnaire.

3. Arrange questions so that they make sense to the respondent and are easy to follow.

4. Generally proceed from general questions to specific questions and from easy questions to difficult ones.

5. Ask questions initially that will arouse interest.

6. Keep open-ended questions to a minimum and place them further back in the questionnaire to insure responses to specific information questions.

B. Formulating questions

1. Keep questions short. Long questions tend to become ambiguous and respondents will often skip a question if it appears too complicated.

2. Choose language appropriate to the level of the respondent. If you are dealing with a specialized group, terminology they are familiar with is appropriate, otherwise avoid it.

3. Choose vocabulary that has the same meaning for everyone.

4. Questions should be limited to a single idea or reference.
   Don't ask: Do you favor or oppose national health insurance and increased social security benefits?
   Ask: Do you favor or oppose national health insurance?
   Then ask: Do you favor or oppose increased social security benefits?

5. Design your questions in such a way to obtain the information you want, but word them so that you protect the respondent's ego.
   Don't ask: Do you know the name of the president of the American Vocational Association?
   Ask: Do you happen to know the name of the president of the American Vocational Association?

6. Avoid leading or biased questions.
   Don't ask: In what way did you find the book offensive?
   Ask: What did you dislike about the book?

7. Set the stage by asking for a positive response before a negative one.
   Ask: What aspects of the training station did you like?
   Then ask: What aspects did you dislike?

C. Types of questions

1. Open and Closed Questions. Open questions allow the respondent to express his opinion or attitude freely with few restraints while closed questions restrict this freedom but provide more factual information.
   Open: A new payroll plan has been proposed by the company. What is your opinion regarding it?
   Closed: A new payroll plan has been proposed by the company.
   ( ) I agree with the payroll proposal.
   ( ) I disagree with the payroll proposal.
   ( ) I think the proposal needs more study.
   ( ) I am unfamiliar with the proposal.

2. Dichotomous Questions. Dichotomous questions limit a choice to one of two possibilities.
   Does your organization have a written grievance procedure?
   _____yes _____no

3. Multiple Choice Questions. Multiple choice questions limit the possibilities of responses but not as severly as dichotomous questions.
   Where do you eat lunch?
   ____I eat in the company cafeteria.
   ____I eat in a restaurant.
   ____I go home for lunch.
   ____I bring a sack lunch.
   ____I do not eat lunch.

4. Scaled Questions. Scaled questions often include attitudes toward various topics. One type of scaled question is a Likert question. There is usually an add number of categories representing a range of attitudes and including a neutral response. The most common format includes five responses.

   Mark an "X" under the category that best expresses your opinion about the following questions.
   Health insurance should include coverage of dental work.

strongly disagree	disagree	undecided	agree	strongly agree
_______	_______	_______	_______	_______

5. Ranking Questions. Ranking questions provide the respondent with a list of items and requires him to mark them in some order of priority. This type of question will often be skipped if the directions become too complicated or the list of items becomes too lengthy. The respondent can adequately handle approximately ten items in a ranking question.

   The City Council has identified the following as a list of city improvements. Please rank these in the order that you think they should be completed.
   ____Widening of Lincoln Street
   ____Construction of a fire station at __Street
   ____Resurfacing of __Street
   ____Sewer repair

6. Face Data Questions. Face data questions may include those designed to collect descriptive, demographic or bibliographical data.

   Age: ____ 18-21
   ____ 22-29
   ____ 30-35
   ____ 36-50
   ____ 50-65
   ____ 66-80
   In which language(s) are you fluent?

D. Physical Appearance

The physical appearance of a questionnaire can affect the responses. The arrangement of the questions on a page and the size of the type used are two such considerations. Questions that are crowded onto a page or printed in small type will be an added obstacle for an individual to overcome. Likewise, an extremely lengthy questionnaire will discourage responses simply by its length. Consideration of the physical properties of questionnaires is as important as the formulation of the questions and the organization of questionnaires.

E. Cover letter

Questionnaires should include some type of explanatory description or cover letter to indicate to the recipient the purpose of the questionnaire and to encourage him/her to respond. Concern over the invasion of privacy causes many individuals to be reluctant about answering unless they know the intent of the study. If any question could be used in a discriminatory manner, a statement should be attached to the questionnaire to indicate the use intended and to assure the confidential nature of the information received.

Sampling

In planning an educational program, ideally, you would like to contact every person involved to get his/her opinion. Obviously, this is an impossible task in terms of time and resources. Each of us works with more people than we have time to poll. Therefore, we often pick a smaller and representative group of the total population and make decisions based on the information they supply us and then apply these decisions to the total group. This is a procedure called sampling.

Regardless of the complexity of the study, there are several steps in sampling. First, define the population. Are you considering all the teachers in a school district or only the secondary teachers? The nature of your study will place some limiting factors on who qualifies as a suitable subject. Because in sampling you are making conclusions based on information from a small group and generalizing them to a much larger population, it is important to make sure that you have chosen a group that is representative of the total population. Then decide what type of sampling plan you are going to use and carry out the plan. Are you going to randomly select subjects from a hat or contact every tenth individual from a list? From the information received from your sample, draw some conclusions and apply those conclusions to the total population.

Additional Resource:

Knowles, Malcolm. The Modern Practice of Adult Education: Andragogy versus Pedagogy. New York: Association Press, 1972.

QUESTIONNAIRE ITEMS

The following questions, indicated by asterisks, are to be used in the construction of a questionnaire. Consider these questions pilot-tested.

* Does your organization conduct an orientation program for new employees?

_____yes _____no

* How many persons are employed in your organization?

_____ 1-19

_____20-29

_____30-49

_____50-75

_____ 76- 99

_____100-199

_____200-299

_____300 or more

* Is there an individual in your organization responsible for the development of orientation programs?

_____yes _____no

If yes, what is that individual's title?

* The following items interest new employees. Please number them in order of importance.

_____history of the organization

_____introduction of staff

_____payroll policies

_____insurance benefits

_____retirement benefits

_____vacation, holidays and leaves

_____employee evaluation

_____conduct code

_____promotions, transfers and demotions

_____training opportunities

_____grievance procedures

_____physical plant tour

_____other (please specify)_______________________________

* Do you feel that some type of training covering new employee orientation programs would benefit your firm?

_____yes _____no

* Briefly state the procedures your organization uses to acquaint a new employee with your organization.

* How important do you consider an orientation program for new employees?

completely unnecessary	somewhat helpful	undecided	helpful	essential
_____	_____	_____	_____	_____

FEEDBACK

In cooperation with your resource person determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource Person
	1. Questionnaire	
______	a. includes a minimum of five questions	______
______	b. two of the questions were written by the student	______
______	c. includes an explanatory statement or cover letter.	______
______	d. was administered to a minimum of ten employers	______
	2. Analysis	
______	a. responses have been tabulated	______
______	b. conclusions based on responses have been drawn	______
______	3. Subject matter outline	______

Name______________________________ University______________________________

DEVELOP A PLAN FOR
SCHOOL-COMMUNITY RELATIONS

Module D-2

The Center for Vocational Teacher Education
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January, 1978

INTRODUCTION

It could be said that the cooperative vocational education program exists at the pleasure of the community. The concept of "community" can be interpreted very broadly or very narrowly. In its broadest sense, "community" would include all of the people remotely touched by a cooperative vocational educational program. In the more narrow sense, it might be limited to certain segments of the population directly concerned with the program.

A good teacher-coordinator of a cooperative education program develops a plan with several strategies for improving relationships between the school program and the community. These strategies are often in the form of information-dissemination activities. The module asks you to develop one informational medium designed to provide information about the vocational program to the business community.

INSTRUCTIONS

Public information programs are designed to develop and foster goodwill between the school and the community. Part of this task is to ensure that the community receives correct and complete information regarding the vocational education program. In this module you are asked to consider the community you are working in and design a brochure to inform a segment of the community about the cooperative education program. If you have had experience designing a brochure and feel that you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will develop one medium designed to provide the business community information about the vocational program.

ACTIVITY I

Consider yourself a teacher-coordinator in a high school cooperative education program. Design a brochure describing the program which will be distributed to the business community. Include the following information:

1. purposes of the cooperative education program
2. objectives of your cooperative education program
3. policies relating to training stations
4. procedures for securing training stations

ACTIVITY II

Show the brochure you have developed to your employer. Ask him to respond to it using the form provided in this module.

RESOURCE SECTION

The role and responsibilities of a teacher-coordinator bring him/her in continual contact with members of the community. Training stations must be selected, training agreements and training plans must be arranged and students must be visited on the job. Each of these activities requires the teacher-coordinator to meet and interact with individuals in the community. Because these contacts influence how people perceive the cooperative education program, a good teacher-coordinator uses them to inform the community, to establish rapport and to gain support for the program.

As important as personal contact is, the cooperative education program cannot rely solely on this informal method. A planned program of public information and publicity is essential to the successful operation of vocational education.

To establish such a program, the teacher-coordinator must identify several things:

1. Who is to be the audience of the public information efforts?
2. What should the identified audience know about the program?
3. What are the best ways of getting the information to the audience?
4. What resources are available?
5. When does the audience need to be reached?
6. How will the efforts be evaluated?

The community is made up of a wide variety of audiences or publics. Each group has its own needs, concerns, and interests which must be analyzed in order to plan a strategy that will reach that particular audience. Efforts aimed at the general population may produce some results but they are not as effective as identifying the specific public you wish to reach and preparing the message especially for them. It is similar to trying to reach the general public with a shotgun.

Some of the pellets will strike objects, but the scattered effort wastes a lot of resources. In contrast, the rifle approach aims at a specific target and, with skill, hits it.

Each community is made up of diverse interest groups. The audiences that are important to the school vocational education programs will vary from community to community. However, there are several general groups that should be considered:

Students
Parents
School Administrators
School Staff
Alumni
Business employers
Civic organizations
Employee organizations
Farmers
Community leaders

With the identification of a specific audience, preparation can begin on what is to be presented. The teacher-coordinator should not assume that the people in the school or the community automatically understand the cooperative education program. Their ideas of the cooperative program may be based on incomplete or erroneous information. To reduce the risk of misinformation, the teacher-coordinator should identify the most important elements of the program and select those elements that are of interest to the specific audience that is to be reached.

The information must be presented in the most effective way. There are a variety of public relations tools, techniques, and methods. The effectiveness of an individual technique or method depends on the circumstances under which it is used. For instance, the techniques for disseminating information or making spot announcements are not as appropriate for expressing appreciation or awarding an honor as other techniques. The following list represents some of the techniques that can be employed in a public relations program:

1. personal informal contact
2. school and local newspaper articles
3. radio and television: interview shows, public service announcements
4. printed materials: pamphlets, brochures, posters, bumper stickers, flyers
5. slide-tape presentations
6. films
7. seminars, adult education classes
8. special events: open house, banquets, award ceremonies, parades, county or state fairs, career week
9. field trips

All plans must take into account the reality of the resources available. Even with minimum resources the teacher-coordinator can establish a school-community relations program. The resources of the school and the talents of both teacher and students can be incorporated into a learning activity that can serve a dual purpose. Careful analysis of the community will help to ensure that the available resources are used widely.

Timing is a key factor in any public relations program. Because the community is continually changing, public relations efforts must be continuous. A well-spaced calendar of promotional activities keeps the community aware of the program. Special emphasis may be placed on certain activities such as annual awards ceremonies or the enrollment of new students in the program.

In order to determine how successful the school-community relations program has been, some means must be developed to evaluate what has been said. This is often done by getting feedback from the community. A series of informal discussions with members from different audiences will tell you what they think about the program and how effective your promotional activities have been throughout the year. More formal surveys can also be used.

Such efforts allow the teacher-coordinator to determine which activities were effective, which audiences were reached or still need to be reached and where the strengths and weaknesses of the program lie. The information gained should be incorporated into the plans for future school-community relations programs.

Brochures

A brochure is a printed publication that focuses on a single message. In it the main points of the topic are identified without the inclusion of many details. Because the brochure is usually a single sheet of paper, the amount of information that can be included is limited. The material that is presented is usually the type of information for which there is continual demand or information that the teacher-coordinator feels should be disseminated.

Designing a Brochure

1. Determine what audience you wish to reach.
2. Determine what type of message will be printed on the brochure. Remember that only a few points can be included in the space of a single sheet.
3. Determine the format of the brochure. This can be done by either designing the paper to fit the text or by arranging the text to fit a pre-determined format. Brochures may be folded a variety of ways.
4. Determine how the brochure will be developed. If the brochure is to be mailed, a portion of it must be left blank for an address and a stamp.
5. Write the copy of the brochure in a simple but lively style. Remember the educational level of your readers.
6. Use catchy phrases to attract your reader. However, do not go overboard and turn your brochure into a string of cliches.
7. Arrange your material, written copy and graphics on the page so that it is appealing to the eye. Spacing, margins, and size of type should be considered. Make sure you do not have a cluttered effect.

8. Include the name of the organization that is publishing the brochure. Listing a person or telephone number to contact for more information is also a wise idea. However, if the brochure is to be used over a long period of time, do not include a specific name or telephone number which may change.

9. Determine the type of paper and colors you will use on the final product. Availability and cost will determine this to a great extent.

10. Pilot test a rough copy of your brochure. You can often work so much on a project that you lose perspective. An uninvolved party can help you identify the strengths and weakness of your efforts before you make final preparations for printing.

11. Get the approval of your school administrator. Because the brochure represents the school, it should have official approval before it is distributed.

12. Make arrangements for printing.

Evaluation of the Brochure

1. Does the brochure focus on a single message? yes_____ no_____
2. Is the information well-organized? yes_____ no_____
3. Is the text clearly written? yes_____ no_____
4. Is the brochure easy to understand? yes_____ no_____
5. Is the overall appearance of the brochure attention-getting? yes_____ no_____
6. Is the brochure attractively arranged? yes_____ no_____
7. Do the graphic designs complement the text? yes_____ no_____
8. Is a referral number given for more information? yes_____ no_____
9. Comments:

FEEDBACK

In cooperation with your resource person, determine if you have satisfactorily fulfilled the requirements of the module by considering the following items:

Student		Resource Person
	1. Brochure	
________	a. about a cooperative education program	________
________	b. includes information about 1. purpose 2. objectives 3. policies 4. procedures	________
________	c. attractively arranged	________
	2. Evaluation of brochure	
________	a. done by employer	________
________	b. used evaluation form provided	________

Name______________________________ University______________________________

Module D-2

KEEP UP TO DATE IN YOUR OCCUPATIONAL SPECIALTY

Module E-1

The Center for Vocational Teacher Education
University of Nebraska-Lincoln
311 Teachers College
Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

One of the distinguishing characteristics of a good vocational education teacher is his/her continuing growth in the profession. This includes keeping up-to-date in his/her occupational specialty and with educational developments. Among the most important reasons for the maintenance of this knowledge is to assure currency and relevancy in the classroom. Another reason concerns credability. Students tend to react more favorably to teachers who are able to provide current examples, directly related to the employment community, to supplament their instruction. Moreover, employers, advisory committee members and others tend to appreciate vocational education teachers who maintain a high level of interest, understanding and growth in the technical aspects of their profession. In this module you will have the opportunity to consider ways to keep up-to-date in your profession.

INSTUCTIONS

The ever-changing nature of life today makes it mandatory for the vocational educator to continue his/her education beyond a college preparation. This can be done both formally and informally. Developing an awareness of the possibilities for professional growth and establishing professional growth habits as a student will greatly aid you in your career. In this module you can consider some of the ways that a vocational educator can keep up-to-date and participate in one type of activity. You are asked to consult recent periodicals to determine what current developments would affect your place of employment and then to consider the possibilities of incorporating that information into a vocational education curriculum. If you have had experience analyzing periodical data and adapting that information for use in the classroom and feel that you can fulfill the performance objective, you may proceed to the activity and feedback.

PERFORMANCE OBJECTIVE

The teacher will keep up-to-date in his/her occupational specialty.

ACTIVITY I

Describe one current development that will significantly affect your employer's business. Use the information contained in last year's issues of Business Week, The Wall Street Journal, Fortune, or another business, industrial or institutional periodical appropriate to your current place of employment. Consider the impact of new technology, equipment or processes on the operation of your employer's business.

ACTIVITY II

Incorporate the information gained in Activity I into a subject matter outline for a high school vocational education class. Include the immediate effects of this development and projected effects for two years in the future.

RESOURCE SECTION

There are many reasons for keeping up-to-date professionally. The ones listed below reflect only a few of the more obvious ones:

1. To keep abreast of technological developments
2. To see trends that affect vocational education
3. To retain certification
4. To keep up with legislation affecting vocational education
5. To participate in policy-making activities
6. To improve methods of teaching and procedures for business
7. To keep up with new instructional materials
8. To provide the student with a relevant education

Professional development is a continuous and ongoing process. There is no such thing as a finished product called a teacher. The demands placed upon the vocational educator constantly change throughout the years and require the successful educator to explore different avenues of professional growth in accordance with professional needs and interests.

The ways that vocational educators choose to keep-up-to-date are numerous and a matter of personal preference. There is no one way that is preferable. Professional growth doesn't depend as much on the method chosen as on the attitude of the educator. Going through the motions of attending conferences, joining organizations or reading professional literature will have no effect on the vocational educator's professional abilities unless that knowledge is thoughtfully incorporated into his/her daily teaching routine. Growing professionally is as much an act of mind as it is a physical activity. Without analyzing, evaluating and incorporating new thoughts and ideas, the activity is wasted effort.

The educator's professional judgment plays an important part in keeping up-to-date. The vocational educator uses this judgment to decide the merits of new ideas, procedures, and research. Each new development should be seriously investigated and considered in all its aspects before its adoption by the educator. Just because something is new or in vogue does not necessarily mean that it will be an improvement to the vocational curriculum. This is where the vocational educator must exercise his/her knowledge of the field.

The pre-service teacher can begin to establish a pattern of professional growth by making an effort to discover the variety of resources and avenues open to him/her. It is unlikely that the vocational educator will ever have as much opportunity later to discover resource materials, services, and consultants as he/she does now as a student. The university faculty, services and library holdings, if properly investigated, provide a wealth of support services to which the vocational educator may later need to refer. Knowledge of available resources will help the vocational educator to solve problems quickly and efficiently.

The following notes are given to you as a partial list of possible avenues of professional growth.

1. Professional organizations and honorary societies - These organizations operate at the local, state and national levels. They include not only professional organizations directly associated with an occupational speciality but also with the field of education. Through membership the vocational educator has the opportunity to identify and work with other professionals in the field and also to participate in policy-making activities which determine the direction of the field. Many professional organizations offer student memberships at reasonable rates. Such organizations also offer their members a journal which records recent and pertinent information in the respective field. Examples:

American Vocational Association (AVA)
Delta Pi Epsilon - business education and distributive education
Pi Omega Pi - business education

2. Related professional organizations - Professional organizations not directly related to vocational education often offer the vocational educator the opportunity to relate vocational education to the world in general.

3. Literature - By reading the literature of the field and general periodicals, the vocational educator can keep up with the latest developments, research and trends. In addition to articles professional periodicals also offer reviews of new books and textbooks and advertisements about the newest equipment available. Examples:

American Vocational Journal
Journal of Cooperative Education
Journal of Marketing
Balance Sheet
Journal of Business Education

4. General information - Without engaging in a formal activity or belonging to a professional organization, the vocational educator can keep up-to-date with the developments and events that affect the field. Newspapers, magazines, radio and television are a rich source of current information. Because vocational education does not exist in a vacuum and one event or new development affects another, the vocational educator needs to be conscious of national trends, economic news and political activities in addition to developments in his/her own profession. Media already plays a major role in daily life. Therefore, it is an easy task to establish a habit of using this source for professional growth.

5. State Department of Education - This agency continually produces new materials for teachers in the form of bulletins, pamphlets and instructional materials. In addition there are consultants available to handle individual problems and to offer training opportunities.

6. University resources - Each university is a resource of not only materials but also professional expertise. The faculty and staff are responsive to the needs of teachers and can provide a service to the community.

7. Colleagues - The members of any school faculty provide a rich source of professional expertise. A colleague's experiences can give you the opportunity to broaden your knowledge and provide you with new information, techniques, or

ideas that can benefit your classes. You also have the advantage of face-to-face communication.

8. In-service education - Additional expertise can be acquired through short-term workshops, clinics, or conferences. The offerings of such programs are usually concise and directed toward a particular need.

9. Research projects - Vocational educators can take advantage of ongoing research by participating in it. Many universities are involved in research projects throughout the country and depending upon your location and interests, it is possible to be associated with the research project.

10. Business contracts - Each business person possesses a level of expertise in a specific technical field which can serve as a source of information for the vocational educator. Daily contact with business leaders allows the vocational educator the opportunity to benefit from this expertise.

11, Visits to business and industry - A planned visit to a business or industrial plant can be a relevant educational experience. Not only are you able to see the newest methods, procedures and equipment, but you are also able to experience their operation in an actual work environment.

12, Graduate study - Formal education beyond the undergraduate degree provides greater indepth study of vocational education.

13. Lectures - Many organizations offer periodic lectures that are appropriate for vocational education. These often are delivered by a well-known expert in a particular field.

FEEDBACK

In cooperation with your resource person, determine whether you have satisfactorily completed the requirements of this module by considering the following:

Student		Resource Person
	1. Current Developments	
______	a. identified one significant current development that will affect your employer's business	______
______	b. identified through the use of recent periodical literature	______
______	c. includes description of how developments will affect employer's business	______
	2. Subject Matter Outline	
______	a. incorporate the information from Activity I	______
______	b. logically organized	______
______	c. includes short- and long-term effects	______

ORGANIZE AND MAINTAIN
THE VOCATIONAL LABORATORY

Module F-2

The Center for Vocational Teacher Education
University of Nebraska-Lincoln
311 Teachers College
Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

In some high school vocational education programs the laboratory is the focal point of the instructional activity. It is the place where students are able to put into practice those theoretical concepts they acquire in class. The laboratory facility is designed to simulate a business environment. The machinery and equipment located in it provide students the opportunity to learn and practice business skills before they are employed. Because the laboratory is physically extensive and impressive as well, organizing and maintaining the vocational laboratory is a major portion of vocational teachers' jobs in many programs.

This module will allow you to utilize your on-the-job experience to develop skill in the organization and maintenance of a vocational education laboratory.

INSTRUCTIONS

The success of a vocational laboratory depends on the planning that goes into its organization and the manner in which the vocational teacher uses it. This module provides you with the opportunity to organize either a business education or distributive education laboratory. You are asked to graphically illustrate a laboratory, complete with furnishings and equipment. If you have had experience organizing a vocational laboratory and feel that you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will draft a plan for either a business education or distributive education laboratory.

ACTIVITY I

A new high school is to be built in your school district and you, as a vocational educator, have been asked to design a vocational laboratory which will accommodate twenty students. Draw a layout for either a distributive education or business education laboratory which shows the following items:

1. a floor plan, scale 1/2 inch = 1 foot
2. the location of utility outlets
3. display areas, including chalkboards, bulletin boards and showcases
4. storage areas
5. room arrangement, including furnishings and equipment

Based on the objectives of your vocational education program, suggest two student activities that utilize the laboratory as drawn. Provide a rationale supporting the inclusion of each of the above items in your plan. In order to prepare your laboratory plan, visit six businesses and examine the equipment they use and the layout of the work environment.

ACTIVITY II

Prepare a list of equipment needed for the operation of your vocational laboratory. Arrange the items in order of their importance from the most important to the least important and provide a justifying rationale for the equipment items and their priority rating. Remember to consider service contracts in your planning. Determine the current cost of the first five items.

RESOURCE SECTION

Vocational Laboratory

The vocational laboratory provides a learning environment for students. As such, it should be organized so that the goals of the vocational program can be safely and efficiently accomplished through use of the lab. Because it is also an expensive item, planning must be done to assure that the facilities are well organized and well equipped and can be used to provide the students with relevant educational experiences both for the present and in the future.

In most programs the vocational laboratory must accommodate a variety of learning activities and needs. Therefore, the physical arrangement of furnishings must be flexible and the equipment must be versatile. The following list suggests some of the variety of uses the laboratory will be involved in:

1. large group work
2. small group work
3. individualized learning
4. demonstrations
5. lectures
6. role playing
7. resource center
8. storage
9. films and film strip viewing
10. skills practice areas

The physical appearance of the laboratory will vary from school to school and depend on the program in which it is used, the number of students enrolled in the program and the amount of resources available. However, in organizing such a facility, the vocational teacher must consider such universal items as space, equipment, and safety.

Assistance in organizing a lab can be obtained from several sources. Many state departments of education provide sets of guidelines for organizing laboratories. Moreover, new laws regarding handicapped persons and OSHA requirements determine, in part, how such a facility is organized. An occupational advisory committee can also provide valuable assistance in assuring that the facilities will be able to provide educational experiences relevant to the business world.

Space

The facilities should supply enough space to accomplish the program's present curricular objectives and yet be flexible enough to allow for future development of the program. Space requirements can range from 30 to 200 square feet per student depending on the nature of the learning activities involved. Of course, heavy duty labs, such as automotive ones, will need a greater amount of space per student than distributive or business education laboratories. As a general rule of thumb vocational teachers should allow 55 square feet per student. Recommendations may vary from state to state so the state guidelines should also be consulted.

Storage is another consideration to be included in figuring the space requirements. An additional 10% - 20% of the instructional space should be allotted for storage purposes. The type, size, shape and nature of the materials and supplies used in the program will determine the type of storage facilities needed. Toxic or volatile materials, for instance, will require specialized housing and handling to insure safe storage. Materials and equipment should be safely stored and yet still be easily accessible to students and teacher.

Once the space requirements have been determined, the teacher must arrange the space into workable areas. Most labs are rectangular in shape. This allows the teacher to observe student activities from all areas of the room. Room dividers and partitions should be chosen so that they do not obstruct the teacher's view of different activity areas. A set of low shelves or storage cabinets can be used to define separate activity areas without impairing the teacher's ability to observe students.

The arrangement of activity areas, furnishings, and equipment will vary from program to program. However, regardless of the program, the room should be arranged so that barrier-free travel lanes exist that are wide enough to allow for easy transportation of equipment and supplies to all areas. Supply sources should be arranged near to the appropriate activity areas so that several activities can be conducted simultaneously with a minimum of disturbance. Areas of noisy activities should be isolated from areas of quieter activities as much as possible.

The following list suggests components that can be incorporated into a lab:

1. Multi-purpose area
2. Small group area
3. Demonstration areas
4. Special lab areas
5. Storage for tools, equipments and supplies
6. Student project storage
7. Reference and audio-visual storage
8. Toilet
9. Instructor's office
10. Library area
11. Material receiving area

Equipment

The purchase of equipment is a major expenditure and should be done with care. Not only will the laboratory need classroom furnishings but also equipment to be used in skill development activities.

Equipment selection should be based on the following considerations:

1. how suitable it is in achieving the instructional objectives
2. the amount of maintenance and space it will require
3. the number of skills that can be learned on it

4. how well it will hold up under heavy use
5. the safety precautions necessary
6. the number of students in the program
7. how similar it is to equipment used in business and industry
8. the availability of adequate utilities

The vocational educator should be knowledgable about a wide variety of equipment. This includes keeping up-to-date on the latest equipment available, knowing the capabilities of various types of equipment and knowing which items provide the best training opportunity in the vocational laboratory. Some teachers find it useful to keep a current list of items needed in the program so that when it is time to requisition equipment and materials, he/she is already prepared. In this way reliance on the opinions of salespeople which may result in undue expenditures for new or unnecessary equipment can be reduced.

Safety

Because the vocational teacher will be working with student learners rather than skilled employees, he/she must be continually aware of safety. The organization of any vocational laboratory must include safety precautions both in planning of a safe physical environment and establishing safety procedures. It has been proven by business and industry that a program of preventive procedures is beneficial in the long run. The following list of measures suggests how the teacher can help to assure that the vocational laboratory is a safe learning environment:

1. All facilities should have an adequate number of electrical outlets for their equipment. Voltage should be appropriate for the type of equipment used.

2. Emergency electrical cut-off switches should be located in each area of the laboratory.

3. An annual inspection of all electrical equipment and outlets should be conducted by a competent technician.

4. Safety equipment necessary to the operation of power equipment should be available and in good working condition.

5. The laboratory should be equipped with two clearly identified exits.

6. Travel lanes should be kept clear of obstructions.

7. The arrangement of work areas should allow the teacher to have full view of the activities.

8. Toxic and volatile substances should be stored in approved safety containers.

9. A first aid kit should be easily accessible in the laboratory.

10. Fire extinguishers must be available and tested regularly.

11. The laboratory should have proper illumination and ventilation.

12. The laboratory should be kept clean and orderly.

13. Safety instruction should be incorporated into instructional activities.

14. Materials and supplies should be stored in suitable containers within easy access to the work areas.

Additional Resources

Nystrom, Bennis C., G. Keith Bayne and L. Dean McClellan. *Instructional Methods in Occupational Education*. Indianapolis: Bobbs-Merrill Educational Publishing, 1977.

Storm, George. *Managing the Occupational Education Laboratory*. Belmont, California: Wadsworth Publishing Company, Inc., 1976.

Suggested Plan for Organizing a Vocational Laboratory

1. Review and consider the goals and objectives of the vocational program and the learning activities that will be involved.

2. Determine the approximate size of classes and the different functions that the lab will need to serve.

3. Figure the space requirement needed and draw a scale version locating walls doors and windows.

4. Locate and define activity areas.

5. Locate permanent fixtures, i.e. utility outlets, display areas, and blackboards.

6. Arrange furnishings and equipment. Scale cut-outs of equipment and furnishing items can be arranged and rearranged on the scale drawing until a satisfactory arrangement has been found. Then items can be drawn in.

7. Check to see that travel lanes and sight lanes have not been obstructed.

Equipment and Furnishings for a Business Office Education Laboratory

Calculators

Dictating machines

Transcription machines

Duplicators

Offset

Numbering machines

Postage meter and mailing machines

Scales

Typewriters

Telephones

Cabinets and files

Check protectors

Desks

Chairs

Bookcases

Equipment and Furnishings for a Distributive Education Laboratory

- Tables
- Chairs
- Cash registers
- Credit-card imprinters
- Calculators
- Price ticket marking machines
- Dressing room
  - mirror
- Model store
  - display cases
  - shelves, counters
  - display equipment
  - apparel forms
- Audio-visual equipment
- Telephone
- Typewriters
- Sign painting or printing equipment
- Storage facilities, lockable

FEEDBACK

In cooperation with your resource person, determine if you have satisfactorily fulfilled the requirements of this module by considering these items:

Student		Resource Person
	1. Plan for vocational laboratory	
_______	a. includes floor plan drawn to scale	_______
_______	b. identifies utility sources	_______
_______	c. shows storage areas, room arrangement, and equipment	_______
_______	d. provides a rationale for the lay-out	_______
_______	e. six businesses were used as resource	_______
	2. Equipment list	
_______	a. arranged in priority order from most important to least important	_______
_______	b. rationale for items and priority rank given	_______
_______	c. the top five items have been priced	_______

Name______________________________ University______________________________

DIRECT STUDENT
LABORATORY EXPERIENCES

Module F-3

The Center for Vocational Teacher Education
University of Nebraska-Lincoln
311 Teachers College
Lincoln, Nebraska 68588

January, 1978

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INTRODUCTION

The vocational education laboratory is an integral part of many vocational education programs. It provides a semi-realistic environment in which students can practice and apply their skills in a low-risk setting. The development of learning activities designed for use in the vocational laboratory is as important as the development of curriculum for other areas of the program. This module will provide you with experience in the preparation of student activities suitable for completion in a vocational laboratory.

INSTRUCTIONS

This module provides you the opportunity to develop one learning activity for a vocational laboratory. The planning of such an activity involves the same elements of curriculum design as other areas of the program. If you have had experience planning a laboratory activity and feel that you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will develop a laboratory activity designed to develop an identified competency.

ACTIVITY I

Develop a laboratory activity designed to teach how to correctly use the telephone in a business setting. The activity should be suitable for a high school vocational education program. In your planning, include:

Competency

Preassessment of students' knowledge and ability

Performance objective

Instructional activity
  Method of instruction
  Instructional materials
  Estimated time span

Evaluation

ACTIVITY II

Show your plan for a laboratory activity to a high school vocational teacher in your community. Have him/her determine whether it is a realistic plan that can be utilized in a high school vocational education program. List any changes the vocational teacher suggests.

RESOURCE SECTION

Planning laboratory learning activities involves consideration of three basic factors:

1. A determination of learning outcomes
2. Development of learning activities
3. Evaluation

In order to be able to plan meaningful learning activities, the vocational teacher must know what competencies the student is expected to master. The identification of competencies can be done by conducting occupational analyses, by consulting the occupational advisory committee and other prominent business leaders, by talking to graduates of vocational education programs, or by consulting lists of verified competencies identified by research groups.

Once the competencies have been identified, performance objectives can be prepared. However, first, the vocational teacher should assess what capabilities the students possess and know what previous learning experiences they have had that would directly relate to the selected competency. This information can be gathered by administering pre-tests, skills inventories checklists or self-assessment forms. The results can be used to determine the performance level of the objectives and learning activities.

The performance objectives should state the expected outcomes for the student and provide both the student and teacher a basis for evaluation. Each performance objective should include who is to perform the activity, what activity the learner is expected to do, under what conditions the activity is to be performed and what constitutes an acceptable level of performance. With these factors outlined, the vocational teacher can develop meaningful learning activities.

The selection of learning activities should be based on the characteristics of the students, the material to be covered, and the various methods and techniques. Developing appropriate learning activities is a difficult process because the combinations of methods, techniques, and devices to employ are endless. To aid you, a list of instructional possibilities is included in this module.

Activities that involve the vocational laboratory should be designed to provide students with hands-on experiences. This is the unique opportunity available in such a facility and it should be utilized fully. The vocational teacher can determine from training plans and coordination visits what type of activities are needed and can predict from occupational analyses and past experiences what activities will be beneficial to the student.

In many cases the availability of equipment requires the vocational teacher to individualize his/her approach so that students will have equal opportunity to use the equipment. If this is the case, resource materials should be developed for such an approach and kept available to the students.

Every learning activity should be designed so that there is some feedback and evaluation. Evaluation provides the teacher the opportunity to see how well the students have met the stated objectives and to identify the strengths and weaknesses of the instructional experience. There is no standard way to evaluate; it can be done either formally or informally. The biggest mistake that can be made in the area of evaluation is not to include it in learning activities.

Instructional Methods, Techniques and Devices

Lectures

Demonstrations by students, teachers or resource people

Group discussion

Role-playing

Panel discussion

Experiments

Field trips

Guest speakers

Programmed learning

Individualized instruction

Question and answer

Case problems

Brainstorming

Games

Simulations

Visual aids, charts, transparencies

Films, filmstrips

Cassettes

Information sheets

In-basket

Problem solving

Small groups

Suggested Activities for a Vocational Laboratory

- Advertising
    - Lay out advertisement
    - Prepare signs and posters

- Sales Demonstration
    - Operating cash register
    - Completing sales check
    - Preparing sales contracts
    - Boxing merchandise

- School Store
    - Purchasing
    - Selling merchandise
    - Receiving and marking stock
    - Stocking
    - Record keeping
    - Preparing displays

- Telephone Techniques

- Typewriting

- Ordering Supplies

- Copying and Duplicating

- Preparing Stencils and Masters

- Collating

- Processing Mail

- Telephone Techniques

- Mailing and Shipping

- Filing

- Arranging Travel Plans

- Record Keeping

- Data Processing

FEEDBACK

In cooperation with your resource person, determine if you have satisfactorily fulfilled the requirements of the module by considering the following items:

Student		Resource Person
	1. Laboratory activity plan	
______	a. designed for high school vocational education program	______
______	b. designed to teach the use of the telephone	______
	c. includes following	
______	1. Competency	______
______	2. Performance objective(s)	______
______	3. Preassessment of students' knowledge and ability	______
______	4. Instructional activity Method of instruction Instructional materials Time requirements and organization	______
______	5. Evaluation	______
	2. Response to laboratory activity	
______	a. plan shown to high school vocational teacher in the community	______
______	b. response based on how realistic the plan is for high school	______
______	c. suggested changes, if necessary	______

Name______________________________University______________________

Module F-3

ASSIST STUDENTS IN APPLYING FOR EMPLOYMENT OR FURTHER EDUCATION

Module G-1

The Center for Vocational Teacher Education
University of Nebraska-Lincoln
311 Teachers College
Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

As a vocational education teacher, one of your responsibilities is to help each of your students in applying for employment or further education. Under your guidance they have developed occupational competencies that are saleable in the job marketplace. However, in addition to their occupational skills, they need to acquire a set of skills which will make them successful in their attempts to get the jobs they want or to continue their education.

As a vocational education teacher, you can assist your students in the following ways:

1. Teach them how to:
    a. prepare resumés
    b. write letters of application
    c. fill out application forms
    d. prepare for interviews
2. Notify and refer employment and educational opportunities to students.
3. Write letters of recommendation for students making application for employment or education.

This module will provide you with experience in assisting students in applying for a job.

INSTRUCTIONS

Part of the vocational education teacher's task of assisting students in applying for employment or further education is writing letters of recommendation. In this module you are asked to discuss with your employer the important elements in such a letter and then to write a letter of recommendation for a student. If you have had experience writing letters of recommendation and feel you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will write a letter of recommendation for a hypothetical student.

ACTIVITY I

Talk with your current employer to determine what he/she considers a good letter of recommendation. Find out what he/she specifically looks for in terms of education, experience, and personal characteristics. List at least five items in order of importance.

ACTIVITY II

Consider yourself a high school vocational education teacher. One of your graduates is applying for full-time employment in a business in your community. Write a letter of recommendation for this student. Assume that this hypothetical student is applying to the business where you are currently employed.

Show the letter of recommendation to your employer and get his/her reaction.

RESOURCE SECTION

As a vocational teacher, you have been in a position to closely observe students in the classroom and on the job. Therefore, you will be asked to write letters of recommendation for students applying for employment or further education. The following guidelines will help you to write effective letters of recommendation.

You have a responsibility to both the applicant and the potential employer whenever you write a letter of recommendation. The letter should be courteous and frank, stating honestly and tactfully the applicant's accomplishments and attributes without overselling. Because a student usually has had limited work experience, an employer must rely on the teacher's judgment and recommendation. In order to keep this trust, the teacher must represent the student fairly. Compliment the applicant where appropriate but don't exaggerate.

Whenever you are asked to write a letter of recommendation, find out as much as possible about the position for which the student is applying. With this information you can write a letter that directly relates the student's education and experience to the needs and expectations of the position. Such a letter is more effective than a general letter.

The format of the letter is generally as follows:

The letter should include a personal salutation if possible. The applicant should be identified by name and by the position for which he/she is applying. The evaluation of the applicant can be based on personal acquaintance, school record, employment record, the nature of work performed, the quality of work performed and reason for leaving. Finally you should express confidence in the applicant's ability to perform responsibly in the position.

Any request for a letter of recommendation would be fulfilled quickly. The prompt receipt of a letter of recommendation can have a bearing on the outcome of who fills the position. Letters of recommendation should also be mailed to the business rather than hand carried by the applicant. Using the mail protects the confidentiality of the communication and gives the letter greater credibility.

The tone and writing style should be considered. The letter should be businesslike with statements that are positive and specific. References to specific incidents during your association with the applicant illustrate your claims.

Words should be carefully chosen so that they clearly express what you wish to convey without any double meanings. The following list of adjectives is applicable:

capable
trustworthy
energetic
courteous
self-confident
competent
hard working
versatile
polite
industrious
punctual
creative
initiative
diligent
thorough
adaptable
intelligent
receptive

What you write is extremely important. Therefore, you should compose a letter of recommendation with care. You should be able to substantiate what you write so confine your remarks to material of which you are sure. Employers are becoming more and more aware of the importance and impact of federal legislation and practices such as affirmative action, Title IX, and civil rights laws.

Keep a copy of the letters of recommendation that you write. You may need to remind yourself of what you said. It is also easier to write another letter of recommendation if you have kept samples of previous letters.

Sample Letter of Recommendation

Beaver Crossing High School
101 Main Street
Beaver Crossing, Nebraska 68313
February 18, 1978

Mother Goose Day Care Center
1920 South Street
Lincoln, Nebraska 68503

Dear Ms. McBride:

It is a pleasure to respond to your inquiry concerning Janna M. Stevens, whom you are considering for the position of child care attendant.

Janna graduated from Beaver Crossing High School in May, 1977. She completed a four-year home economic program and participated in the local and state activities of Future Homemakers of America. During my association with Janna, I have found her to be a conscientious and pleasant worker.

She works well with other people and especially likes to work with children. During the testing done at kindergarten round-up registration, she demonstrated her ability to gently but firmly handle pre-school children.

I have no reservations in recommending Janna Stevens for the position of child care attendant.

Sincerely,

Susan Christy
Home Economics Instructor

FEEDBACK

In cooperation with your resource person, determine if you have satisfactorily fulfilled the requirements of this module by considering the following items:

Student		Resource Person
	1. Discussion about letters of recommendation	
______	a. with employer	______
______	b. determined specific items employer looks for in 1. education 2. experience 3. personal characteristics	______
______	c. list of at least 5 items	______
	2. Letter of recommendation	
______	a. for a hypothetical high school graduate	______
______	b. clearly written and typed	______
______	c. has been shown to employer	______

Name____University__________________________

ORGANIZE OR REORGANIZE AN OCCUPATIONAL ADVISORY COMMITTEE

Module H-1

The Center for Vocational Teacher Education
University of Nebraska-Lincoln
311 Teachers College
Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

The lay advisory committee is the main link between the vocational education program and the community. It is a group of citizens with an interest in vocational education which provides advice regarding the appropriateness of various aspects of the program, gives assistance to the program and serves as a liaison between the program and the community.

More specifically, the vocational advisory committee can help to keep a curriculum current, react to course objectives and advise on the acquisition of instructional materials and hardware. The committee members can also help to describe the program to the community, serve as resource speakers in classes and help to evaluate the effectiveness of the program.

The vocational advisory committee is made up largely of business persons like your own employer. Your employment relationship will allow you to gain a special perspective through this module about a businessperson's attitude toward involvement in an advisory committee.

INSTRUCTIONS

Advisory committees are in operation at the local, state and federal levels of vocational education. The focus of this module will be on the local advisory committee. Because the advisory committee is composed of local business persons and, therefore, dependent on their goodwill and cooperation, you are asked to determine what the attitude of one business person is toward advisory committees and how willing he/she is to participate or serve on one. If you have had experience organizing or reorganizing an occupational advisory committee and feel that you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will determine a business person's attitude about occupational advisory committees.

ACTIVITY I

Organize and present to your employer a brief description of an occupational advisory committee in a vocational program. Include:

1. Purpose of the committee
2. Responsibilities of the committee
3. Operation of the committee, including schedule of meetings, authority, and membership

ACTIVITY II

Use the questionnaire provided in this module to determine your employer's attitude regarding occupational advisory committees and his/her willingness to participate in one. Write a short summary of your findings.

RESOURCE SECTION

An occupational advisory committee is an integral part of a vocational education program. It is so vital to the program that federal and state authorities legally require the incorporation of such a committee in reimbursed vocational programs.

A local advisory committee is a permanent committee established by the school's board of education. It operates in a strictly advisory capacity with no administrative responsibility or authority. The value of such a committee lies in the counsel and advice it provides regarding the operation of the vocational education program.

As a liaison group between the school and the community, the occupational advisory committee supports the vocational education program by fulfilling the following functions:

1. Providing advice on the instructional content of courses
2. Provide recommendations concerning the acquisition of equipment and facilities
3. Provide assistance in conducting community and occupational surveys
4. Provide assistance with student placement for both cooperative education training experience and for full-time employment
5. Provide assistance in developing public relations programs
6. Provide assistance in program evaluation
7. Provide assistance in identification and utilization of community resources
8. Provide recommendations regarding program staffing

The process of organizing an occupational advisory committee is time consuming. However, the time spent in laying a solid foundation is worthwhile. The advisory committee is an ongoing committee that should operate as long as the vocational program exists. The members of the committee and the board of education and the school personnel will, however, change throughout the years.

The care taken in the initial stages of organization to record the purposes, roles and responsibilities of the committee will assure continuity of operations. Much of the success of an advisory committee depends upon how well-informed the participants are and whether the participants feel that they are making a contribution.

The basic procedure of establishing an occupational advisory committee is as follows:

1. Get the approval of the school administrator. Be prepared to provide a rationale justifying having an advisory committee and a statement concerning its purpose. An administrator will want to know why such a committee should be established, how it will operate and be utilized and how it will be organized before granting approval.

2. Get the authorization of the board of education. This body has the power to establish new committees. The same information that was given to the school administrator should be presented to the board of education in the form of a written request.

3. Form a nominating committee to recommend potential members. Most advisory committees include from seven to nine members. The selection of members should be based on knowledge of the community and occupational expertise. The composition of the committee may include representatives from employers, employees and students.

4. Present the list of potential committee members to the board of education for appointment. Submit only the exact number of persons to be included on the committee. If one of the potential members is rejected for some reason, the nominating committee should submit another nominee.

5. Officially extend an invitation to the committee members. This can be done with a letter form the administrator or school board president.

   The letter should include all pertinent information about the purpose, responsibilities and value of the advisory committee. It should also include provisions for the recipient to indicate whether he/she accepts or rejects the appointment.

6. Release the news to the appropriate media that an occupational advisory committee has been formed. Include a statement of purpose and a list of committee members.

7. Plan the initial advisory committee meeting. This meeting is extremely important in setting the tone of the subsequent operation of the committee. An overview of the program should be given, followed by a formulation of operational guidelines and a program of work for the following meetings. The vocational teacher or school administrator can serve temporarily as chairman until a permanent one is chosen.

Survey on Advisory Committees

Your opinion is needed to help me learn how an advisory committee can help a vocational education program. Below are a list of ways in which an advisory committee can help. Please place a check in the left-hand column beside those activities that you think are most important. In the right-hand column, put a check in the box that indicates the amount of time that you think should be spent on the activities you checked as important.

If I were an advisory committee member, I think the following activities would be important contributions to the vocational education program:

		Amount of Time		
		a little	average	a lot
_____	1. be helpful in the placement of graduates of a vocational education program			
_____	2. provide advice about current business practices, techniques and trends			
_____	3. help establish goals and objectives for a vocational education program			
_____	4. recommend the types of equipment needed to meet the objectives of a vocational education program			
_____	5. assist in evaluating the vocational program			
_____	6. help promote the vocational education program in the community			
_____	7. recommend training stations for students			
_____	8. help in the arrangement of field trips			
_____	9. recommend equipment and facilities accessible to handicapped students			
_____	10. provide advice on the content of vocational courses			
_____	11. identify community and/or occupational needs			
_____	12. identify specific areas that should be added or deleted from the course content			
_____	13. review the curriculum to see if it is current			
_____	14. help establish and evaluate safety practices in the classroom			

	Amount of Time		
	a little	average	a lot
______15. offer advice concerning employee attitude and habits			
______16. Make suggestions for adult education courses			

17. Have you served on an occupational advisory committee?

______ yes ______ no

18. I could find the time to serve as a member of an occupational advisory committee.

______ yes ______ no

19. An occupational advisory committee should meet:

______ twice a year

______ three times a year

______ monthly during the school year

______ monthly

20. In what other ways could the occupational advisory committee assist the vocational education program?

FEEDBACK

In cooperation with your resource person, determine if you have satisfactorily fulfilled the requirements of this module by considering these items:

Student		Resource Person
	1. Presentation	
____	a. is a brief description of an occupational advisory committee	____
____	b. includes 1. purpose 2. responsibilities 3. operation	____
____	c. given to employer	____
	2. Questionnaire	
____	a. administered to one employer	____
____	b. includes conclusions regarding attitude and willingness to participate	____

Name________________________________University______________________

MAINTAIN AN OCCUPATIONAL ADVISORY COMMITTEE

Module H-2

The Center for Vocational Teacher Education
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Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

The organization of a vocational education advisory committee is only the first step toward the development of a useful and valuable helping hand for the vocational education program. Unfortunately, some advisory committees never get beyond the first organizational step. In order to operate effectively, the advisory committee must establish a working relationship with the vocational educator and the community. Advisory committee members need to be assured that they are making a worthwhile and important contribution to the vocational education program. Because their contact is with the vocational educator, it falls to him/her to fulfill this need.

Good advisory committees usually have a vocational education teacher who takes an active role as a facilitator and maintainer of the advisory committee's activities and functions. This module will help to prepare you for that role.

INSTRUCTIONS

This module is designed to assist you in determining how to best employ the resources of your occupational advisory committee and to give you the opportunity to plan a tentative agenda for one committee meeting. You are asked to complete a worksheet by listing various activities that an advisory committee can do and which are beneficial to the vocational education program. This list of activities will provide you with material for a tentative agenda. If you have had experience working with advisory committees and feel that you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will develop a vocational education advisory committee meeting agenda.

ACTIVITY I

A worksheet entitled "Functions of an Advisory Committee" is provided in this module. On it are listed eight areas in which an occupational advisory committee can assist the vocational education program. Suggest two advisory committee activities for each area.

ACTIVITY II

Develop a meeting agenda for either a business education or a distributive education advisory committee that is fully organized and has operated for at least one year. Include at least eight points on the agenda. The list of activities from Activity I can provide topics for discussion that can be included in the agenda. Get your employer's reaction to the agenda.

RESOURCE SECTION

The success of an occupational advisory committee depends, to a large degree, on the initial meetings. A newly organized committee cannot be expected to operate efficiently and effectively immediately. The committee members need time to learn a new role, to become acquainted with each other and to establish a set of operating procedures.

The initial committee meeting can be instrumental in forming the attitudes of the committee members. Each member is a busy individual and, therefore, will appreciate a well-planned and efficiently conducted meeting. Evidence that the committee is needed and can make a substantial contribution to the success of the vocational program should ensure the cooperation of the members.

The consequences of a poorly used advisory committee can be detrimental to the vocational program. Committee members who feel that their time has been wasted can become some of the most vocal and the severest critics of the program. Because the committee members are usually prominent persons in the community, they can easily have an adverse effect on school-community relations.

First Meeting

The vocational teacher can provide assistance and leadership during the transitional period. During this time the teacher should act as chairman of the committee until the necessary officers are chosen and an operating plan and rules and regulations are formulated. The organizational meeting should be used to inform the members about the school and vocational program and to establish a degree of rapport.

The following suggestions will help the vocational educator plan the first advisory committee meeting:

1. Inform each member of the date, time and place of the meeting in advance. A copy of the proposed agenda should also be sent to each member. Representatives of the school administration and board of education may also be included. Using the vocational classroom as a meeting room will help familiarize the committee members with the program.

2. Prepare an agenda. Remember that the purpose of the organizational meeting is to acquaint the members with the school program and to begin planning the committee's work.

    a. Welcome remarks
    b. Introduction of all persons present
    c. Description of the vocational education program, complete with objectives, facilities, resources, plans and problems
    d. Discussion of rules and regulations with the appointment of an ad hoc committee to draft a set of working rules and regulations
    e. Discussion of committee's work for the coming year. Major tasks should be suggested.
    f. Arrangements for the next meeting including scheduling of time and place and a tentative agenda
    g. Adjournment

3. Plan to begin and end meetings on time.

4. Refreshments may be arranged. This is especially important for the first meeting because it allows a time of informal discussion during which the members can become better acquainted. A decision on future refreshments should be left to the committee.

The committee should be furnished paper and pencils and a roster containing the names, addresses and telephone numbers of committee members and ex-officio members. If the board of education has drafted a committee charter or a set of procedures, copies of these should be supplied to each committee member. Every effort should be made to fully acquaint the advisory committee with the vocational education program and to keep it up-to-date on current developments and issues in the program, the profession and the school.

The effectiveness of an advisory committee is determined, in part, by how it is utilized. Because the advisory committee meets periodically and includes assembling a number of people together, it is unrealistic to involve it in the daily operation of the program. Day-to-day decisions are related to specific situations and need to be made without delay. The value of an advisory committee lies in its contribution to the long-range planning of the vocational program. The vocational educator should help the committee to consider the areas in which the experience and guidance of the members would be most beneficial. Establishing an annual plan of projects, activities or tasks, which could be modified as needed helps to define the role and responsibilities for the year in the minds of the committee members and the board of education.

To help assure continuity in operation it is important for the advisory committee to develop a written set of guidelines, to maintain minutes and to write an annual report regarding the committee's operation. The committee, along with the board of education and the vocational education staff, will experience periodic turnover in members and the guidelines, minutes and reports will provide a continuous record of the activities and accomplishments to date. These materials will prove helpful in orienting new members and will eliminate or reduce organizational or reorganizational tasks.

Meetings throughout the year are organized in the same manner the first meeting was. Members are notified of upcoming meetings and provided a tentative agenda prior to the meeting. The vocational educator, often acting in the role of secretary, usually arranges the meeting because he/she has direct access to the facilities and school resources.

The way the advisory committee conducts its meetings should be determined by the members. They should be businesslike but may be as formal or as informal as the members wish. However, it is wise to follow parliamentary procedure when official decisions are being made.

Sample Agenda

1. Call to order
2. Roll call, welcome to guests
3. Minutes of the last meeting
4. Announcements and reports
5. Discussion of specific items of business
6. Decisions or further investigation
7. Tentative plan for the next meeting
8. Adjournment

Sample Agenda for Regular Meeting

Agenda for Distributive Education Advisory Committee

April 3, 19____

7:30 p.m.	Meeting called to order	Chairman
	Minutes of the last meeting	Secretary
	Review of the slide/tape presentation on DECA developed by students . . .	Students
	Follow-up study on recent graduates. Includes graduates of the last five years . . .	Ad Hoc Committee
	Discussion of needed changes in program objectives What strengths and weaknesses does the follow-up study show?	
	Suggestions for resource material and speakers for advertising unit	
	Plan for next meeting Set date and location	
	Adjournment	

Sample Agenda for Regular Meeting

Agenda for Business Education Advisory Committee

March 10, 19___

7:30 p.m. Meeting called to order . . . . Chairman

Minutes of last meeting . . . . Secretary

Announcements
  Business contest participation

Report on safety practices observed at training stations ...Ad hoc Committee

Plans for student field trip to Western Insurance Company on April 23, 19___

Review of program's goals and objectives. . . . . Voc. Teacher
  What areas do the goals and objectives cover?
  Are the goals and objectives suitable to today's employment requirements?
  Does the program provide students with entry level skills required for employment?

Plans for next meeting
  Continued discussion of program's goals and objectives, specifically changes and revisions
  Initial discussion on promotion of business education.
  Set date and location of next meeting

Adjournment

Functions of an Occupational Advisory Committee

Eight functions of an occupational advisory committee are listed below. Under each function suggest two activities that an advisory committee can do to support the vocational education program.

1. Course Content Advisement

2. Public Relations

3. Equipment and Facilities Advisement

4. Student Placement

5. Community/Occupational Surveys

6. Program Staffing Recommendations

7. Identification of Community Resources

8. Program Evaluation

FEEDBACK

In cooperation with your resource person, determine if you have satisfactorily fulfilled the requirements of this module by considering the following items:

Student		Resource Person
	1. Functions of an Advisory Committee	
______	a. completed form	______
______	b. includes two suggested activities under each function	______
	2. Agenda	
______	a. developed for either a business education or distributive education advisory committee	______
______	b. contains at least eight points	______
______	c. has received employer's reaction and approval	______

Name________________________________University____________________________

Module H-2

ESTABLISH CRITERIA FOR STUDENT PERFORMANCE IN A VOCATIONAL EDUCATION PROGRAM

Module I-1

The Center for Vocational Teacher Education
University of Nebraska-Lincoln
311 Teachers College
Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

By its very nature, a vocational education program demands accountability in terms of student performance. Much of the vocational education program involves the mastery of progressively more complicated skills that will be utilized on the job. Therefore, the final level of performance expected of students is usually determined by the level of performance required of workers on the job.

As a pre-service teacher, and as an employee of a business, you are in a unique position to gain a perspective on what performance levels for students should be. This module will provide you with experience in determining these performance levels.

INSTRUCTIONS

Establishing criteria for student performance usually does not involve generating new guidelines or standards. Standards already exist. The vocational teacher must identify what they are and determine if they are applicable to the vocational education program. In this module you are asked to establish criteria for student performance in either typewriting or cash register operation. If you have had experience establishing criteria and feel you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will establish performance level criteria for either typewriting or cash register operation.

ACTIVITY I

Consider yourself a vocational teacher who is organizing a new vocational education program. Part of your organizational responsibilities include establishing criteria for student performance of psychomotor skills. Determine the level of performance for either typewriting or cash register operation that is acceptable for an entry level job a student may apply for.

ACTIVITY II

Check with five businesses in your community to determine if your criterion is realistic. Consult either the personnel office or review job descriptions of entry level positions that involve using the typewriter or cash register. List the recommended entry-level skill that each business would like applicants to possess for typewriting or cash register operation.

RESOURCE SECTION

Establishing criteria for student performance is essential to the instructional process. The criteria are the standards that the students are expected to achieve. As such they determine the instructional design of the program. With criteria identified, the vocational teacher can organize learning experiences into courses, units, and lesson. He/she can also use the performance criteria as measures of how well the students are fulfilling the program's goals.

Occupational standards are determined largely by the world of work. Through vocational education programs students are receiving instruction and training that will enable them to enter the job market with the skills, knowledge and expertise to perform in entry level positions. Therefore, the vocational teacher must be aware of the requirements and expectations of business and industry.

In addition to the business community, the vocational teacher can consult the following sources to determine performance levels for various skills:

1. Occupational Outlook Handbook, for general job descriptions
2. Textbooks and instructional materials
3. Professors, instructors, and colleagues
4. Trade unions
5. Government labor offices
6. Professional organizations
7. Students and graduates
8. Occupational analyses
9. Licensing requirements
10. State Departments of Education

In establishing any criteria, the vocational teacher should consult more than one source of information. There is a danger of setting criteria that are too narrow or apply to only one community or geographic area. Because the criteria affect the total instructional program, the vocational teacher should establish standards that take into account today's mobile student. Occupational advisory committees, professional colleagues, and business leaders can be helpful in verifying how appropriate the criteria are to be.

FEEDBACK

In co-operation with your resource person determine whether you have satisfactorily completed the requirements of this module by considering these items:

Student		Resource person
	1. Criteria for student performance	
_______	a. includes level of performance for either typewriting or cash register operation	_______
_______	b. appropriate for an entry level position	_______
	2. Verification	
_______	a. consulted five businesses	_______
_______	b. determined if criterion is realistic	_______
_______	c. consulted personnel office or job description	_______

Name_________________________ University___________________________

Module I-1

EVALUATE YOUR VOCATIONAL PROGRAM

Module I-2

The Center for Vocational Teacher Education
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Lincoln, Nebraska 68588

January, 1978

INTRODUCTION

The reasons for evaluating vocational education programs for their effectiveness and efficiency are varied, numerous, and convincing. No committed vocational educator is against program evaluation. How else can he/she know whether the vocational program is producing results consistent with the objectives?

This module will provide you with experience in developing an evaluation instrument.

INSTRUCTIONS

The methods of evaluation are numerous and varied. The use of a particular type of evaluation is determined by the aspect of the program to be evaluated. For example, evaluating the activities of the occupational advisory committee may require a different form of evaluation from evaluating the success of the program's graduates.

This module deals with developing an evaluative instrument to check all aspects of the program. You are asked to design a checklist that can be used to determine how complete the vocational education program is. A sample checklist has been included in this module. If you have had experience evaluating vocational education programs and feel that you can fulfill the performance objective, you may proceed to the activities and feedback.

PERFORMANCE OBJECTIVE

The teacher will develop an evaluation data collection instrument to be used in evaluating the vocational education program.

ACTIVITY I

Consider yourself a vocational teacher in a high school vocational education program. Develop a checklist to be used in evaluating your vocational education program. A sample checklist has been provided in this module. Consider the following:

Program
Students
Employers
Facilities
Cooperative Education
Record Keeping

ACTIVITY II

Show your evaluation checklist to a high school vocational teacher in your community. List his/her suggestions.

RESOURCE SECTION

Evaluating the vocational education program is important to the success of the program. The vocational teacher needs to identify which areas and activities of the program have been successful and which have not. With this information he/she can restructure parts of the program, make improvements and plan effectively for the future.

Evaluation is so important that different agencies and groups are more and more frequently demanding it. The following list indicates only the more obvious ones:

1. Federal agencies
2. State agencies
3. School accrediting agencies
4. Boards of education
5. Parents and students
6. Taxpayers

Because the end of the school year is such a hectic time, activities that are conducted then are often overlooked or given only cursory attention. To insure that the program evaluation is done, planning for it should be part of the initial stages of the program. This includes deciding what kind of techniques to use, who should conduct the evaluation, when the program should be evaluated and what should be done with the results.

The choice of evaluation method is largely a matter of personal preference. The vocational teacher must use professional judgment in determining what is most appropriate for the program. For example, in the early years of a program, the vocational teacher will want a comprehensive evaluation to determine if all areas of the program have been organized. In later years, he/she may wish to concentrate on particular aspects, such as follow up studies of graduates.

The question of who should conduct an evaluation also arises. The vocational teacher, of course, is the most familiar with the program. He/she knows from active participation what is occurring. However, sometimes it is wise to get a second, less involved view. The occupational advisory committee works closely with the program and is interested in its success. In some programs, this group has participated in or conducted a periodic evaluation of the program.

Evaluation occurs throughout the year. Informally community members, parents, students and school staff are judging the program's effectiveness. A successful vocational teacher needs this type of feedback. In addition to this, there is a need to formally assess the strengths and weaknesses of the program. This can only realistically be done towards the end of the year.

Once a formal evaluation has been finished, something must be done with the results. The vocational teacher and other interested parties should review the results and make decisions regarding the functioning of the program in the coming year and in the future. This process should also be recorded so that a record exists showing the conclusions and rationale behind them. Copies of such a report should be kept in the vocational education program files and distributed to appropriate persons, i.e., administration, advisory committee, board of education and state department of education.

Keeping a record of what has been accomplished and what needs to be accomplished is extremely important. Relying on memory is not as successful as being able to locate an account of the year's activities.

Sample Checklist

The following questions are designed to determine how complete the vocational education program is and to identify areas of strength and weakness.

Goals and Objectives	Yes	No
1. Have goals and objectives been established for all apects of the program?	___	___
2. Have the goals and objectives been approved by the administration and board of education?	___	___
3. Have student performance objectives been prepared?	___	___
4. Is a written copy of the program goals and objectives available to the public?	___	___
Advisory Committee		
1. Has the administration and board of education approved the establishment of an occupational advisory committee?	___	___

FEEDBACK

In cooperation with your resource person determine whether you have satisfactorily completed the requirements of this module by considering the following:

STUDENT	Checklist	RESOURCE PERSON
________	a. covers entire vocational education program	________
________	b. includes suggested areas	________
________	c. shown to a high school vocational teacher	________
________	d. includes teacher's suggestions	________

Name ________________________________ University ____________________

Module I-2